

A patient experiences pain and some gingival swelling in the anterior segment of the mandible. The mandibular lateral incisor has a shallow restoration, is tender to percussion and gives a positive response to the electric pulp tester. There is some mobility. The most likely diagnosis is

- A. acute apical abscess.
- B. acute serous pulpitis.
- C. lateral periodontal abscess.
- D. acute suppurative pulpitis.
- E. chronic ulcerative pulpitis.

The placement of a retentive pin in the proximal regions of posterior teeth would most likely result in periodontal ligament perforation in the

- A. mesial of a mandibular first premolar.
- B. distal of a mandibular first premolar.
- C. distal of a mandibular first molar.
- D. mesial of a mandibular first molar.

The air-water spray used as a coolant in high speed cutting of a cavity will

- 1. decrease pulp damage.
  - 2. reduce frictional heat.
  - 3. keep the operating site clean.
  - 4. reduce clogging of cutting instruments.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The proposed mechanism by which a calcium hydroxide preparation initiates secondary dentin formation in direct pulp cappings is by

- A. releasing calcium ions.
- B. stimulating differentiated ameloblasts to lay down dentin.
- C. stimulating fibroblasts to elaborate nuclei of the first order.
- D. stimulating undifferentiated cells of the tissue to differentiate into odontoblasts.

When resecting the apical aspect of a tooth during endodontic apical surgery, it is appropriate to

- A. perform a 45-degree bevel.
- B. remove as little of the root as possible.
- C. avoid curettage of the periradicular lesion.
- D. place an amalgam retrofill.

For composite resin preparations, cavosurface enamel margins are bevelled because

- 1. a bevelled margin produces a more favorable surface for etching.
  - 2. a bevelled margin improves the edge strength of the composite resin.
  - 3. after etching, the bonding agent reduces microleakage.
  - 4. the procedure eliminates the need to polish the restoration.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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When using a high-speed handpiece for cavity preparation, the heat generated is directly related to the

1. duration of cutting.
2. size, speed and sharpness of the bur.
3. use of air and water spray.
4. effectiveness of the suction.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following instruments can be used for placing gingival bevels on cast gold inlay preparations?

1. Margin trimmers.
2. Enamel hatchets.
3. Carbide finishing burs.
4. Small diamond discs.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following is the most probable postoperative complication of intracoronar bleaching for a tooth that has an inadequate internal seal?

- A. Fracture.
- B. Discolouration.
- C. Internal resorption.
- D. External root resorption.

Fractured incisal angles in the permanent teeth of adolescent patients are best restored using

- A. glass ionomer.
- B. gold castings.
- C. full coverage restorations.
- D. acid etch composite resin techniques.

What are the purposes of using occlusal splints?

1. To change the pattern and degree of tactile afferent neural impulses.
2. To immobilize teeth.
3. To prevent teeth from disturbing occlusal sensory input.
4. To produce a permanent change in the occlusion.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Histologically, a pulp polyp consists of all of the following EXCEPT for

- A. a mass of collagenous fibres.
- B. epithelial rests of Malassez.
- C. proliferating capillaries.
- D. fibroblasts.

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Treatment of primary herpetic gingivostomatitis should include

1. palliative treatment.
  2. steroid therapy.
  3. control of secondary infection.
  4. application of dilute hydrogen peroxide.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Tooth mobility may be due to

1. excessive occlusal force.
  2. decreased osseous support.
  3. periodontal abscess.
  4. gingival inflammation.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Lichen planus occurs most frequently on the

- A. buccal mucosa.  
B. tongue.  
C. floor of the mouth.  
D. gingiva.

Enlargement of the gingiva, described as idiopathic fibromatosis, is best described as

- A. degeneration.  
B. inflammation.  
C. hyperplasia.  
D. neoplasia.

The primordial cyst probably results from

- A. cystic degeneration of the stellate reticulum early in the formation of the tooth.  
B. epithelial remnants in the periodontal ligament.  
C. an extension of pulpal inflammation after death of the pulp.  
D. failure of formation of the enamel matrix.  
E. transformation of the dental lamina.

Histological sections of a lesion removed from the apex of a carious tooth show immature fibrous tissue and chronic inflammatory cells. The most likely diagnosis is a/an

- A. acute periapical abscess.  
B. odontogenic fibroma.  
C. radicular cyst.  
D. periapical granuloma.  
E. central fibroma.

Radiographs of Garre's osteomyelitis show

- A. formation of sequestra.  
B. a worm-eaten pattern of bone destruction.  
C. thickening of the cortex.  
D. sinus tracts.

Increasing the kilovoltage setting on the dental x-ray machine results in

- A. more gamma radiation.  
B. greater collimation.  
C. more penetration.  
D. greater secondary radiation at the level of the skin.

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Oral lesions that fail to heal may be associated to

1. tuberculosis.
  2. syphilis.
  3. neoplasia.
  4. diabetes.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In dental radiology, patient protection from radiation is most important for

- A. patients receiving antibiotics.
- B. patients receiving corticosteroids.
- C. individuals over fifty-years of age.
- D. pregnant women.
- E. young adults.

A salivary calculus is a

- A. sialolith.
- B. rhinolith.
- C. phlebolith.
- D. thrombolith.

An abnormal decrease in the flow of saliva is

- A. ptyalism.
- B. sialometaplasia.
- C. xerostomia.
- D. pyroglossia.

Which of the following can cause a contact stomatitis?

- A. Dentifrice.
- B. Lipstick.
- C. Acrylic.
- D. Antibiotics.
- E. All of the above.

Fordyce's granules are

- A. ectopic sebaceous glands.
- B. ectopic sweat glands.
- C. small calcified nodules.
- D. aberrant mucous glands.

A large encapsulated fluid-filled tumour is removed from the hard palate. The most appropriate method of determining the nature of this lesion is to

- A. examine the fluid under a microscope.
- B. culture the fluid and examine for bacterial growth.
- C. submit the tissue for histological examination
- D. submit the tissue for exfoliative cytological study.
- E. aspirate the fluid for electrophoresis study.

Acute maxillary sinusitis is associated with

1. pain in the posterior maxillary teeth.
  2. nasal discharge.
  3. tenderness of posterior maxillary teeth to percussion.
  4. increase of pain when bending over.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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The collimator of an x-ray tube

- A. produces a more homogeneous x-ray beam.
- B. prevents secondary radiation.
- C. focuses the x-ray beam.
- D. restricts the diameter of the x-ray beam.

The quantity of radiation output in a dental X-ray apparatus is a function of

- 1. time.
  - 2. kVp.
  - 3. ma.
  - 4. filtration.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A zinc phosphate cement base

- A. has the same radiopacity as amalgam.
- B. is less radiopaque than amalgam.
- C. has the same radiopacity as gold.
- D. cannot be seen on a radiograph.

Papillary hyperplasia under a denture is usually due to (an)

- A. moniliasis.
- B. ill fitting denture.
- C. allergy to denture cleanser.
- D. avitaminosis.

Chronic disseminated Langerhans cell disease

- A. produces a solitary eosinophilic lesion.
- B. produces bony defects as focal areas of bony rarefaction.
- C. occurs only in adult life.
- D. is a malignant lesion.

Which of the following is/are associated with dentin dysplasia type I?

- 1. Obliteration of pulp chambers.
  - 2. Normal appearance of clinical crowns.
  - 3. Small underdeveloped roots.
  - 4. Periapical radiolucent areas.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Radiographically, a benign bone neoplasm is differentiated from a malignant one because in the benign lesion

- 1. the margins are irregular and fade into the surrounding bone.
  - 2. the cortex remains intact.
  - 3. there can be perforation of the periosteum.
  - 4. the margins are defined and demarcated.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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On an occlusal radiograph, it is possible to misdiagnose the midline palatal suture as a

- A. fracture.
- B. palatal cyst.
- C. granuloma.
- D. abscess.

Median anterior maxillary cysts occur in the

- A. nasal bone.
- B. incisive canal and in the palatine process.
- C. zygomatic process.
- D. hamular process.

Squamous cell carcinomas of the lip occur most frequently on the

- A. commissures.
- B. lower lip near the midline.
- C. inner surface of upper lip.
- D. inner surface of lower lip.
- E. upper lip near the midline.

The clinical appearance and texture of an early carcinoma of the floor of the mouth can be

- A. red and soft.
- B. white and rough.
- C. ulcerated and indurated.
- D. All of the above.

Oral foci of infection are of greatest clinical significance in the presence of

- A. polycythemia vera.
- B. iritis and uveitis.
- C. eczema and urticaria.
- D. rheumatoid arthritis.
- E. subacute bacterial endocarditis.

A patient with hyperthyroidism may exhibit

- A. weight gain.
- B. delayed eruption of teeth.
- C. exophthalmos.
- D. gingival inflammation.

In fibrous dysplasia

- A. foci of cartilage are a common histological finding.
- B. an inflammatory infiltrate is characteristically present.
- C. there are characteristic changes in the blood chemistry.
- D. a ground-glass appearance is present on radiographs.

The most frequent location of a dentigerous cyst is the

- A. third molar area.
- B. symphysis of the mandible.
- C. midline of the hard palate.
- D. apical area of a devitalized tooth.
- E. premolar area.

The prolonged use of antibacterial lozenges or mouthwashes contributes to the development of

- A. oral candidiasis.
- B. geographic tongue.
- C. cancrum oris.
- D. Koplik's spots.
- E. aphthous ulcers.

Ludwig's angina may cause

- A. respiratory obstruction.
- B. cavernous sinus thrombosis.
- C. suppurative encephalitis.
- D. subdural empyema.

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Tissue from a multilocular radiolucent area of the posterior mandible microscopically shows follicular areas lined with cylindrical cells resembling the enamel organ. The most likely diagnosis is a/an

- A. neurofibroma.
- B. ameloblastoma.
- C. central fibroma.
- D. periodontal cyst.
- E. dentigerous cyst.

Intraoral soft tissue examination will NOT assist in the diagnosis of

- A. lichen planus.
- B. sinusitis.
- C. erythema multiforme.
- D. anemia.
- E. vitamin deficiencies.

Which of the following conditions are associated with AIDS?

- 1. Acute marginal periodontitis.
  - 2. Hairy leukoplakia.
  - 3. Candidiasis.
  - 4. Geographic tongue.
- A. (1) and (2)
  - B. (1) (2) (3)
  - C. (1) and (4)
  - D. All of the above.

Which of the following lesions has a tendency to bleed easily?

- A. Pyogenic granuloma.
- B. Osteoma.
- C. Fibroma.
- D. Papilloma.
- E. Lipoma.

White lesions of the oral mucosa may be produced by

- 1. thickening of the epithelium.
  - 2. increase of the keratinized layers.
  - 3. coagulation by heat or chemicals.
  - 4. mycotic infection.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Pyogenic granuloma is most frequently found on the

- A. tongue.
- B. gingiva.
- C. buccal mucosa.
- D. tonsillar pillars.
- E. lips.

Which of the following is NOT associated with osteogenesis imperfecta?

- A. Brown teeth.
- B. Brittle bones.
- C. Thin enamel.
- D. Blue sclerae.

Inflammation involving the bone marrow of the jaw caused by infection from a tooth or the periodontium is called

- A. osteoma.
- B. periostitis.
- C. osteomyelitis.
- D. osteosclerosis.
- E. pericementitis.

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Which of the following anatomic spaces is most likely to be involved as a result of an apical infection of a mandibular third molar?

- A. Sublingual.
- B. Submandibular.
- C. Submental.
- D. Submasseteric.

Laboratory examination of the blood of a patient with an acute bacterial infection would show

- A. lymphocytosis.
- B. leukocytosis.
- C. monocytosis.
- D. leukopenia.
- E. eosinophilia.

Oral lichen planus has lesions which

- A. bleed readily.
- B. occur in the debilitated.
- C. exhibit a positive Nikolsky's sign.
- D. histopathologically show lymphocytic infiltration.

Swelling related to increased tissue fluid is called

- A. thrombosis.
- B. edema.
- C. hematoma.
- D. embolism.
- E. surgical emphysema.

Chronically inflamed submandibular lymph nodes are

- A. soft.
- B. not palpable.
- C. firm.
- D. fixed.

Oral leukoplakia has the most favourable prognosis when it is

- A. present in a non-smoker.
- B. accompanied by pain.
- C. infected with *Candida albicans*.
- D. speckled in appearance.
- E. on the hard palate.

Median anterior maxillary cysts are found in

- A. the zygomatic process of the maxilla.
- B. the incisive canal.
- C. the uvula.
- D. the hamular process.

Soft, white, elevated plaques of the oral mucosa are characteristic of

- A. angioma.
- B. candidiasis.
- C. actinomycosis.
- D. herpes simplex.
- E. submucous fibrosis.

The redness of an inflammatory lesion of oral mucosa is due to

- A. increased number of capillaries.
- B. increased size of capillaries.
- C. decreased thickness of epithelium.
- D. decreased connective tissue elements.
- E. All of the above.

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Which of the following most appropriately describes a traumatic neuroma?

- A. A slow-growing, painless neoplasm.
- B. A slow-growing, hypersensitive nodule.
- C. A tumour at a recent extraction site.
- D. A tumour of the tongue.

An occluded submandibular duct can be diagnosed by

- A. history.
- B. palpation.
- C. sialography.
- D. occlusal radiographs.
- E. All of the above.

The typical history of a mucocele is

- A. a slowly growing tumour mass.
- B. a pain immediately before eating.
- C. a trauma, swelling, rupture, disappearance and recurrence.
- D. an ulcerated area on buccal mucosa.
- E. frequent bleeding.

Median palatine cysts are classified as

- A. developmental.
- B. residual.
- C. idiopathic.
- D. odontogenic.

Lidocaine (Xylocaine) is an example of a local anesthetic which is chemically classified as an

- A. amide.
- B. ester.
- C. aldehyde.
- D. ethamine.
- E. aminide.

Which of the following cements can chemically bond to enamel?

- 1. Zinc phosphate cement.
- 2. Polycarboxylate cement.
- 3. Reinforced zinc oxide eugenol cement.
- 4. Glass ionomer cement.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Early signs and symptoms of localized alveolar osteitis (dry socket) include

- 1. bleeding.
- 2. bad odour.
- 3. pus formation.
- 4. pain.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Immediately after the extraction of a tooth, postoperative instructions should include

- 1. analgesics.
- 2. regular diet.
- 3. application of cold.
- 4. frequent rinsing of the socket.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Which of the following is a principle of closed fracture management?

- A. Incision at fracture site.
- B. Rigid fixation of fragments.
- C. Debridement of fracture site.
- D. Immobilization of fracture.

Preoperative evaluation of a healthy patient requiring elective oral surgery in hospital should include

- 1. a complete history.
- 2. a physical examination.
- 3. an oral examination.
- 4. appropriate laboratory tests.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Extraction of a tooth is CONTRAINDICATED in the dental office for a patient who

- A. is 4 months pregnant.
- B. has a Factor-VIII deficiency.
- C. is hypothyroid.
- D. had a myocardial infarct six months ago.

All of the following are side effect of prolonged tetracycline therapy EXCEPT

- A. superinfection.
- B. photosensitivity.
- C. vestibular disturbances.
- D. discoloration of newly forming teeth.
- E. gastrointestinal symptoms (when administered orally).

Loss of sensibilit over the distribution of the inferior dental nerve is a possible complication from

- 1. removal of an impacted mandibular third molar tooth.
- 2. removal of a torus mandibularis.
- 3. an acute osteomyelitis of the mandible.
- 4. an uncomplicated removal of a mandibular second molar.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In a safe general anesthetic mixture, the MINIMALLY acceptable percentage of oxygen is

- A. 5%.
- B. 10%.
- C. 20%.
- D. 50%.
- E. 80%.

Cardiac arrhythmias are most commonly seen during administration of

- A. thiopental.
- B. halothane.
- C. ethyl ether.
- D. nitrous oxide.

Patient nausea during nitrous oxide administration is an indication that the patient

- A. is nervous.
- B. has not eaten for some time.
- C. is allergic to nitrous oxide.
- D. has received the nitrous oxide too quickly.

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The first sensation lost after administration of a local anesthetic is

- A. pain.
- B. touch.
- C. pressure.
- D. proprioception.

Protracted use of tetracycline may produce symptoms of vitamin K deficiency because tetracycline

- A. is detoxified by the liver.
- B. combines chemically with vitamin K.
- C. inhibits growth of intestinal bacteria.
- D. interferes with the conversion of prothrombin to thrombin.

All of the following drugs are useful in the treatment of cardiac arrhythmias EXCEPT

- A. digitalis.
- B. lidocaine.
- C. procainamide.
- D. aminophylline.

When comparing opioids with NSAIDS which of the following is correct?

- A. Opioids impair gastric motility to a greater extent.
- B. NSAIDS cause more constipation.
- C. Opioids predispose to more bleeding.
- D. NSAIDS cause more drowsiness.

General anesthetics can do all of the following EXCEPT

- A. produce delirium.
- B. stimulate medullary centers.
- C. produce a state of unconsciousness.
- D. reduce perception of painful stimuli.
- E. decrease excitability of the motor cortex.

Which of the following statements is/are true regarding acetylcholine?

- 1. It is the neurotransmitter at both sympathetic and parasympathetic ganglia.
- 2. It is rapidly hydrolysed in the body by cholinesterase.
- 3. It can produce both muscarinic and nicotinic actions.
- 4. It is the drug of choice as an antidote in atropine poisoning.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

When used alone, which of the following agents will not produce satisfactory anesthesia?

- A. Isoflurane.
- B. Sevoflurane.
- C. Nitrous oxide.
- D. Desflurane.

Which of the following can be mistaken on a radiograph for a chronic alveolar abscess?

- 1. Mental foramen.
- 2. Periapical cemento-osseous dysplasia.
- 3. Posterior palatine foramen.
- 4. Nasopalatine foramen.

- A. (1)(2)(3)
- B. (1) et (3)
- C. (2) et (4)
- D. (4) seulement
- E. Tous les énoncés ci-dessus.

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Displacement of mandibular fractures is dependent upon

- A. proprioceptor nerve action.
- B. TMJ mobility.
- C. tooth in line of fracture.
- D. direction of blow.

Which of the following is the most important factor in the preoperative evaluation of a patient?

- A. Medical history.
- B. Laboratory data.
- C. Electrocardiogram.
- D. Pulse and blood pressure.

The mode of action of the sulfonamides upon susceptible bacteria is by

- A. inhibiting the biosynthesis of p-aminobenzoic acid.
- B. competing for nutrients in the tissue environment of the microorganisms.
- C. interfering with the synthesis of cell wall protein.
- D. interfering with the synthesis of folic acid.

Immediate toxic reactions to local anesthetic administration are most commonly due to

- A. deterioration of the anesthetic agent.
- B. hypersensitivity to the vasoconstrictor.
- C. hypersensitivity to the anesthetic agent.
- D. excessive blood level of the anesthetic agent.

Lidocaine

- 1. is a local anesthetic agent.
- 2. has topical anesthetic properties.
- 3. is an antiarrhythmic agent.
- 4. has anticonvulsant properties.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

An infected root is accidentally displaced into the maxillary sinus. Examination of the socket reveals perforation of the sinus lining. Therapy should consist of

- 1. acrylic template to cover socket opening and saline rinses.
- 2. closure of oro-antral communication and antibiotic coverage.
- 3. antibiotic coverage and observation.
- 4. antrostomy for retrieval of root.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

Early anoxia is characterized by

- A. cyanosis.
- B. bradycardia.
- C. bronchospasm.
- D. amnesia.

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In achieving hemostasis, external cold application produces

- A. positive chemotaxis.
- B. a transient vasoconstriction.
- C. increased vascular permeability.
- D. accelerated healing.

If a patient is allergic to penicillin, the most appropriate antibiotic for an odontogenic infection would be

- A. ampicillin.
- B. cephalexin.
- C. clindamycin.
- D. declomycin.
- E. streptomycin.

Use of nitrous oxide analgesia produces tinnitus as a result of

- A. central nervous system reaction.
- B. peripheral action on the eardrum.
- C. increased pressure in the middle ear.
- D. cochlea effect.
- E. dysphoria.

Cardiovascular collapse caused by a high circulating dose of a local anesthetic is due to

- A. vagal stimulation.
- B. histamine release.
- C. myocardial depression.
- D. medullary stimulation.

An 8 year old has lost tooth 1.1. Tooth 1.2 will most likely erupt

- A. without encroaching upon the space for tooth 1.1.
- B. encroaching upon the space for tooth 1.1.
- C. distally to the space for tooth 1.2.

The normal gingiva of the child patient is diagnosed on the basis of

- 1. contour.
- 2. stippling.
- 3. sulcus depth.
- 4. tight fitting gingival collar.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In a 7 year old, the intrusion of a permanent central incisor can cause

- 1. laceration of the periodontal membrane.
- 2. loss of pulp vitality.
- 3. ankylosis.
- 4. root resorption.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Loss of a permanent maxillary first molar may result in

- 1. distal drift of the adjacent premolar.
- 2. mesial drift of the adjacent molar.
- 3. overeruption of the opposing tooth.
- 4. increase in overbite.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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A space maintainer in the posterior segment will

- A. prevent extrusion of opposing teeth.
- B. prevent the eruption of the permanent teeth.
- C. retard eruption of the permanent teeth.
- D. maintain arch length.

Which of the following processes is NOT active in causing tooth eruption?

- A. Growth of the dentin.
- B. Growth of the root.
- C. Growth of the enamel.
- D. Pressure from periapical tissue.

Following the premature loss of the deciduous molars, the Angle classification is most accurately determined using the

- A. facial profile.
- B. permanent molars.
- C. permanent canines.
- D. permanent incisors.

In an 11 year old with an otherwise acceptable occlusion, an impacted maxillary canine

- A. could be extracted.
- B. could be retained and the first premolar removed to allow the canine to erupt.
- C. could be surgically exposed to speed its eruption.
- D. could constitute a problem requiring consultation with an orthodontist.
- E. All of the above.

Primary herpetic lesions of the oral cavity are most likely to occur during

- A. 1 to 5 years.
- B. 6 to 12 years.
- C. 13 to 16 years.
- D. Any age.

Poor oral hygiene during orthodontic treatment may result in

- 1. edema.
  - 2. bleeding.
  - 3. loss of stippling.
  - 4. gingival desquamation.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In a healthy periodontium, attached gingiva

- 1. is bound firmly by the periosteum to the alveolar bone.
  - 2. is attached by collagen fibres to the cementum.
  - 3. displays varying degrees of stippling.
  - 4. has a keratinized surface.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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Which one of the following statements is FALSE?

- A. Stippling in healthy gingiva varies with location.
- B. Healthy gingiva does not bleed.
- C. The interdental papillae in the posterior regions are broader than in the anterior region.
- D. Healthy gingiva is bright red in color.

The Silness-Löe Index measures

- A. periodontal disease.
- B. oral hygiene.
- C. attachment level.
- D. probing depth.

The fluoride ion

- 1. is excreted rapidly by the kidney.
  - 2. passes the placental barrier.
  - 3. is deposited in teeth.
  - 4. is deposited in bone.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Histopathologic alterations associated with the pathogenesis of periodontal disease include

- 1. inflammatory exudate that can involve neutrophils, lymphocytes and plasma cells.
  - 2. proliferative and degenerative changes of the junctional epithelium.
  - 3. collagen destruction subjacent to the junctional epithelium.
  - 4. deepening of the gingival sulcus.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Mobility of teeth WITHOUT loss of bone support suggests

- A. a primary occlusal trauma.
- B. a secondary occlusal trauma.
- C. an atrophic condition of the periodontium.

When analyzing occlusion, which of the following findings is/are potentially damaging?

- 1. Marginal ridge discrepancies.
  - 2. Extruded teeth.
  - 3. Wide occlusal tables resulting from excessive wear.
  - 4. Deep overbite with minimal overjet.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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Which of the following factors may affect probing depth measurements?

1. Probing force.
2. Probe type.
3. Angulation of probing.
4. Periodontal health.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

If a periodontal probe is inserted 4 or 5mm to the base of a pocket on the mesialbuccal of a tooth and then pushed facially causing blanching, this indicates that

- A. gingival hyperplasia exists.
- B. there is an inadequate zone of attached gingiva.
- C. the lateral wall of the pocket does not consist of bone.

In the development of gingivitis, the fibre groups first lost are

- A. oblique.
- B. horizontal.
- C. transeptal.
- D. free gingival.

The color of gingiva is influenced by

1. the degree of keratinization.
2. connective tissue vascularity.
3. amount of melanin pigmentation.
4. subgingival deposits.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Supragingival calculus is most often found on the

- A. lingual of mandibular anterior teeth.
- B. buccal of mandibular anterior teeth.
- C. palatal of maxillary molars.
- D. lingual of mandibular molars.

A characteristic of a periodontal pocket is

- A. gingival edema.
- B. gingival hyperplasia.
- C. alveolar bone loss.

Gingival hyperplasia may be

- A. familial.
- B. idiopathic.
- C. drug induced.
- D. All of the above.
- E. None of the above.

A protective bite plate is indicated in all of the following EXCEPT to

- A. reduce tooth mobility.
- B. prevent excessive tooth wear.
- C. control a bruxism habit.
- D. manage temporomandibular joint pain dysfunction syndrome.
- E. prevent migration of teeth.

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Infraosseous defects may occur at the

1. palatal surface of maxillary anterior teeth.
  2. buccal and lingual surfaces of molars.
  3. interproximal areas.
  4. bifurcations and trifurcations.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Primary herpetic gingivostomatitis most frequently occurs

- A. before age 10.  
B. between 10 and 20 years of age.  
C. between 20 and 30 years of age.  
D. after age 30.  
E. at any age.

Following root planing, the amount of gingival shrinkage depends upon

- A. the thickness of the gingiva.  
B. the degree of gingival edema present.  
C. whether the pocket orifice is broad or narrow.  
D. the degree of suppuration present.  
E. All of the above.

Destructive occlusal forces can be reduced by

1. selective grinding.
  2. orthodontics.
  3. restorative treatment.
  4. tooth extraction.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The benefits of open flap debridement alone include

- A. direct access for thorough debridement.  
B. pocket reduction.  
C. increased opportunity for new attachment.  
D. A. and B.  
E. All of the above.

In the design of a removable partial denture, the objectives of surveying the diagnostic cast are to

1. determine the path of insertion.
  2. locate tooth surfaces that can act as guiding planes.
  3. locate retention areas.
  4. locate the height of contour.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

High humidity in a room where zinc oxide and eugenol impression paste is being mixed will

- A. increase the setting time.  
B. not affect the setting.  
C. prevent any setting.  
D. decrease the setting time.

The main purpose of flux in soldering is to

- A. dissolve surface oxides and prevent further oxidation.  
B. prevent recrystallization and grain growth.  
C. prevent oxidation and lower the melting range of the solder.  
D. dissolve surface oxides and lower the melting range.

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While the teeth are set in wax, dentures are tried in to

1. verify the maxillomandibular records.
  2. verify the vertical dimension of occlusion.
  3. evaluate esthetics.
  4. assess facial contour and lip support.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Heated impression modeling compound is "tempered" in warm water before placement in the mouth in order to

- A. avoid burning the soft tissues.  
B. reduce contraction error.  
C. initiate a chemical reaction.  
D. minimize distortion.

The immersion of a hydrocolloid impression in 2% potassium sulphate for 2 to 5 minutes will

- A. retard the set of the stone.  
B. accelerate the set of the stone.  
C. inhibit the formation of bubbles in the stone.  
D. minimize the distortion of the hydrocolloid material during the storage time.

Which of the following prevents distortion of a reversible hydrocolloid impression material?

- A. Slow removal from undercuts.  
B. Storage in 100% humidity for 30 minutes.  
C. Storage in air.  
D. Storage in 2% solution of potassium sulfate for 60 minutes.

The principal ingredient of a zinc phosphate cement powder is

- A. zinc phosphate.  
B. silica.  
C. magnesium oxide.  
D. zinc-oxide.  
E. calcium hydroxide.

The major disadvantage of zinc phosphate used to cement crowns is the

- A. development of heat during setting.  
B. pulp irritation.  
C. lack of edge strength.  
D. low crushing strength.

A fixed bridge pontic should

1. restore tooth function.
  2. reduce thermal conductivity.
  3. be biologically acceptable.
  4. reduce galvanic reactions between abutments and other restorations.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

"Cuspid guided occlusion" occurs when the

- A. teeth on the nonworking side make contact in lateral excursions.  
B. teeth on the working side make contact in lateral excursions.  
C. canine and lateral incisors make contact in lateral excursion.  
D. posterior teeth make no contact in lateral excursions on the working side.

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The muscle of the floor of the mouth in the molar region which requires special attention in the final mandibular denture impression is the

- A. genioglossus.
- B. geniohyoid.
- C. mylohyoid.
- D. hyoglossus.

Wrought gold alloy clasps are superior to cast gold clasps of the same cross-sectional area because they

- 1. are coarser grained.
  - 2. exhibit greater flexibility
  - 3. are more accurately adapted to the tooth.
  - 4. have a higher proportional limit.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In designing a removable partial denture, the location of clasps is determined on

- A. a master cast after tooth preparations are completed.
- B. a surveyed diagnostic cast prior to preparation of occlusal rest areas.
- C. the refractory cast.

In removable partial denture design, the surface of the abutment tooth most often altered to provide clasp reciprocity is

- A. mesial.
- B. distal.
- C. occlusal.
- D. buccal.
- E. lingual.

Rests on terminal abutment teeth for a cast metal removable partial denture provides

- A. primary retention.
- B. indirect retention.
- C. vertical stability.
- D. lateral force transmission.

Compared with zinc-phosphate cement, polycarboxylate cement has

- A. longer working time.
- B. lower film thickness.
- C. increased compressive strength.
- D. superior biologic compatibility.

Reversible hydrocolloids transform from sol to gel and gel to sol as a function of the

- A. concentration of the fillers and plasticizers.
- B. percent composition by weight of water.
- C. concentration of potassium sulfate.
- D. temperature.

A facebow is used to record the

- 1. vertical dimension of occlusion.
- 2. intercondylar distance.
- 3. horizontal condylar inclination.
- 4. relationship of the maxilla to the hinge axis.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

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Unsupported, hyperplastic tissue in an edentulous maxilla is most often found

- A. near the tuberosities.
- B. in the vault.
- C. in the anterior segment of the arch.

I-bar clasp arms and circumferential clasp arms both

- 1. terminate in retentive undercuts lying gingival to the height of contour.
  - 2. originate from the framework and approach the tooth undercut area from a gingival direction.
  - 3. provide retention by the resistance of metal to deformation rather than frictional resistance of parallel walls.
  - 4. are circular in cross-section.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A removable partial denture rest should be placed on the lingual surface of a canine rather than on the incisal surface because

- A. less leverage is exerted against the tooth by the rest.
- B. the enamel is thicker on the lingual surface.
- C. visibility and access are better.
- D. the cingulum of the canine provides a natural recess.

The crown-root ratio is

- 1. the comparison of the length of root retained in bone to the amount of tooth external to it.
  - 2. an important factor in abutment tooth selection.
  - 3. determined from radiographs.
  - 4. determined during surveying of the diagnostic cast.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In comparison to gold alloys, base metal alloy removable partial denture frameworks can be made

- A. more corrosion resistant.
- B. lighter.
- C. more ductile.
- D. with greater casting accuracy.

If hydroquinone is added to the monomer, it will

- A. inhibit polymerization.
- B. initiate polymerization.
- C. activate polymerization.
- D. None of the above.

After processing, complete dentures on the original stone casts are rearticulated in order to correct occlusal disharmony produced by

- A. flasking and processing procedures.
- B. inaccurate jaw relation records.
- C. errors in registering of centric relation record.

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Dental polysulfide rubber impression materials are polymerized with the following initiator:

- A. lead peroxide.
- B. sodium peroxide.
- C. carbon disulfide.
- D. hydrogen peroxide.
- E. phosphorus pentoxide.

The accuracy of the polysulfide and silicone rubber impression materials

- A. is better than that of polyethers.
- B. compares favorably with reversible hydrocolloids.
- C. is inversely proportional to temperature and humidity.

Polysulfide impression materials

- A. have a lower "tear strength" than condensation silicone.
- B. have a better dimensional stability than addition cured silicones.
- C. have a better detail reproduction than both condensation and addition polymerization silicones.
- D. demonstrate, after polymerization, cross-linking chains.

Effective tissue displacement with elastic impression materials can be accomplished by

- 1. injection of the material into the gingival sulcus.
- 2. placement of chemical-impregnated cords into the gingival sulcus.
- 3. electrosurgical means.
- 4. a firm tray material.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following are characteristics of restorative glass ionomer cements?

- 1. Release of fluoride.
- 2. Bonding to enamel.
- 3. Setting not affected by a well controlled moist environment.
- 4. Irritating to pulpal tissues.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Dental amalgam

- A. is subject to solubility and disintegration in the oral fluids.
- B. has a satisfactory resistance to compressive stress.
- C. adheres chemically to the walls of the cavity.

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Dental amalgams that are made from alloys containing 6% copper, compared to those made from alloys containing 13% copper

1. are more resistant to tarnish and corrosion.
2. demonstrate less creep or flow.
3. demonstrate less marginal breakdown in clinical service.
4. generally have lower compressive strength.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following would occur if a zinc containing amalgam is contaminated with saliva during condensing?

1. No change in compressive strength but lower tensile strength.
2. Increased expansion.
3. Reduced flow or creep.
4. Increased surface pitting.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Inlay wax patterns should be invested as soon as possible in order to decrease distortion caused by

- A. reduced flow.
- B. drying-out of the wax.
- C. release of internal stress.
- D. continued expansion of the wax.

The retentive arm of a combination clasp (wrought wire retentive arm and cast lingual arm) is better than a cast arm because it

- A. has a lower yield strength.
- B. produces less stress on the abutment tooth during removal and insertion.
- C. can be used to engage deeper undercuts due to a high modulus of elasticity.
- D. is economical to fabricate.

Which of the following is NOT a direct physiological response to additional forces placed on abutment teeth?

- A. Resorption of bone.
- B. Increase thickness of cementum.
- C. Increased density in cribiform plate.
- D. Decrease in width of periodontal ligament.

The retention of an indirect, extra-coronal restoration can be improved by

1. decreasing the taper of the preparation wall.
2. lengthening the clinical crown.
3. adding grooves.
4. an antirotation key.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

After initial setting, glass ionomer cements should have a coating agent applied in order to

- A. hasten the final set.
- B. protect the cement from moisture.
- C. retard the final set.
- D. protect the cement from ultraviolet light.
- E. create a smooth finish.

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Streptomycin

1. enhances the activity of some neuromuscular blocking agents.
  2. can induce 8th cranial nerve damage.
  3. is a broad-spectrum antibiotic.
  4. is used to treat tuberculosis.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

When used for conscious sedation, nitrous oxide may

1. produce signs of inherent myocardial depression.
  2. produce an indirect sympathomimetic action.
  3. cause the patient to sweat.
  4. produce numbness of the extremities.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Epinephrine is one drug used in the management of an acute anaphylactic reaction (Type I allergic reaction) because it

1. relaxes bronchial muscles.
  2. stimulates heart muscle and increases heart rate.
  3. increases systolic blood pressure.
  4. produces vasoconstriction in many vascular beds.
- A. (1) (2) (3)  
B. (1) and (2)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following should be done prior to pin hole placement in an extensive amalgam preparation?

1. Examine the radiograph.
  2. Determine the subgingival anatomic contours.
  3. Remove caries and unsupported enamel.
  4. Place a pilot hole at the dentino-enamel junction.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A patient has a smooth, red, protruding lesion at the tip of the tongue. Microscopic examination reveals a stratified squamous epithelium covering loose, fibrous connective tissue with many thin-walled, vascular spaces. The most appropriate diagnosis is

- A. fibroma.  
B. papilloma.  
C. hemangioma.  
D. pleomorphic adenoma.  
E. granular cell tumour (myoblastoma).

Osteogenesis imperfecta is manifested by

- A. punched-out radiolucencies in the jaws.  
B. numerous unerupted supernumerary teeth.  
C. osteoporosis and anemia.  
D. multiple fractures and blue sclera.

Eosinophilic granulomas

- A. are found at the apices of nonvital teeth.  
B. occur in infants.  
C. are a nonlipid reticulo-endotheliosis.  
D. are caused by a virus.

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A tilted molar can be used as a fixed partial denture abutment if

1. it undergoes orthodontic uprighting first.
2. a coping and telescopic crown are used on the abutment.
3. a non-rigid connector is placed in the fixed partial denture.
4. its long axis is within 25° of the long axis of the other abutments.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

When making an indirect wax pattern on a stone die, improved adaptation will result from

- A. the use of a separating medium.
- B. soaking the die in cold water.
- C. burnishing the wax to the die.
- D. melting the wax onto the die.

Which of the following maxillary teeth are more likely to present with a palatal abscess?

1. Lateral incisors.
2. Central incisors.
3. First molars.
4. First premolars.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Permanent first molars begin to calcify at

- A. 1 to 4 months in utero.
- B. birth.
- C. 3 to 6 months.
- D. 7 to 11 months.
- E. 12 to 15 months.

Using current radiographic techniques, a satisfactory intraoral radiograph can be produced with skin exposures as low as

- A. 1 - 10mR.
- B. 100 - 600mR.
- C. 1 - 5R.
- D. 150 - 1,000R.

A patient with new complete dentures complains of a burning sensation in the palate. The most likely area requiring relief is at the

- A. frenum.
- B. post dam.
- C. incisive foramen.
- D. foveae palatinae.

If a complete mandibular denture causes a burning sensation in the premolar region, this is due to the denture exerting pressure in/on the

- A. fibres of the buccinator muscle.
- B. lingual branch of the mandibular division of the trigeminal nerve.
- C. underlying bone.
- D. mental branch of the inferior alveolar nerve.
- E. buccal frenum area.

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Prophylactic antibiotic therapy is indicated for patients with

- A. a functional heart murmur.
- B. mitral valve prolapse.
- C. an osseointegrated dental implant.
- D. an organic heart murmur.

Hypoglycemia in a diabetic patient can be characterized by

- 1. nausea.
  - 2. palpitations.
  - 3. sweating.
  - 4. mental confusion
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following is the most severe adverse effect of antibiotic therapy?

- A. Urticaria.
- B. Angioneurotic edema.
- C. Diarrhea.
- D. Anaphylactic reaction.
- E. Flatulence.

Which of the following should NOT be prescribed to a pregnant patient?

- A. Erythromycin.
- B. Cloxacillin.
- C. Tetracycline.
- D. Cephalosporins.

In horizontal alveolar bone loss, the pathway of inflammation is

- A. through the periodontal ligament.
- B. through the epithelial attachment.
- C. through the cortical bone of the alveolar process.
- D. perivascularly, into the marrow spaces of the crestal bone.

The interdental gingival col is the area between the

- A. facial and lingual interdental gingiva.
- B. facial and lingual attached gingiva.
- C. distal and mesial interdental gingiva.

Inefficient progress in permanent molar uprighting is most likely due to

- A. chronic periodontitis.
- B. heavy force application.
- C. lack of anchorage.
- D. occlusal interference.

Which of the following basic forcep movements is NOT used for extracting teeth?

- A. Apical.
- B. Rotational.
- C. Mesial.
- D. Lingual (palatal).

Infrabony defects occur most frequently in

- A. cancellous bone.
- B. cortical bone.
- C. bundle bone.
- D. interseptal bone.

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Detection of periodontal pockets is done by

- A. visual examination.
- B. radiographic examination.
- C. testing for mobility of teeth.
- D. probing.

Periodontitis

- 1. develops from gingivitis.
  - 2. is associated with continuous destruction of the alveolar bone.
  - 3. goes through stages of tissue destruction and quiescence.
  - 4. results in occlusal traumatism.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Patients with occlusal parafunctional habits may have

- A. soreness in masticatory muscles.
- B. occlusal wear facets.
- C. tooth mobility.
- D. All of the above.

The condyle of the mandible is unique because

- A. it develops from Meckel's cartilage.
- B. both interstitial and appositional bone formation are present.
- C. both primary and secondary cartilage growth centres are present.

If the norm for the cephalometric angle SNA is 82 degrees and a patient's SNA is 90 degrees, this would likely indicate

- A. protrusive maxillary incisors.
- B. dysplasia of the anterior cranial base.
- C. maxillary prognathism.
- D. mandibular prognathism.

Hydroxyapatite used in dental surgery is

- A. used to fill osseous defects.
- B. derived from tooth enamel.
- C. resistant to fracture.
- D. osteogenic.

Sutures can be

- 1. used to hold soft tissues into position.
  - 2. used to control bleeding.
  - 3. resorbable or non-resorbable.
  - 4. used to stretch soft tissues into position.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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A dental laboratory has returned a removable partial denture framework. The framework fit the master cast well but when tried in the mouth, a stable fit could not be achieved. The possible cause(s) of the problem is/are

1. distortion in the final impression.
2. insufficient retention.
3. improper pour of the master cast.
4. casting error.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

For amalgam restorations, a 90° cavosurface angle accommodates the

1. condensing of amalgam.
2. compressive strength of amalgam.
3. tensile strength of amalgam.
4. compressive strength of enamel.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following should NOT be corrected with a porcelain veneer?

- A. Peg lateral incisor.
- B. Diastema between 1.1 and 2.1.
- C. Cross bite on tooth 1.3.
- D. Enamel hypoplasia.

Which of the following is the most effective pharmacologic treatment for angular cheilitis?

- A. Penicillin.
- B. Erythromycin.
- C. Tetracycline.
- D. Clindamycin.
- E. Nystatin.

The following conditions can be the result of ill-fitting complete dentures.

1. Soft tissue hyperplasia.
2. Alveolar ridge resorption.
3. Angular cheilitis.
4. Carcinoma.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The difference between gingivitis and periodontitis is

- A. radiographic changes are present only in gingivitis.
- B. radiographic changes are present only in periodontitis.
- C. changes in gingival colour are present only in gingivitis.
- D. changes in gingival colour are present only in periodontitis.

Which of the following hemostatic agents is most likely to create a systemic reaction?

- A. Aluminum sulphate (Pascord®).
- B. Aluminum chloride (Hemodent®).
- C. Epinephrine (Racord®).
- D. Ferric sulphate (Astringent®).

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A reciprocal clasp arm on a removable partial denture will provide

1. resistance to horizontal force.
  2. indirect retention.
  3. stabilization.
  4. direct retention.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The initiation of cemental caries differs from enamel caries because

- A. dental plaque is not involved.  
B. the age of onset is younger.  
C. it is usually associated with abrasion.  
D. it progresses more quickly.

In an acute apical abscess (acute periapical abscess), which of the following teeth is most likely to spread infection to the submandibular space?

- A. Mandibular second bicuspid.  
B. Maxillary third molar.  
C. Mandibular first molar.  
D. Mandibular third molar.  
E. Mandibular lateral incisor.

Which of the following procedures should be used to reduce the risk of exposure to mercury vapour?

1. Staff education.
  2. Rubber dam.
  3. High velocity suction.
  4. Surgical mask.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following is NOT a common side effect from a tricyclic antidepressant?

- A. Orthostatic hypotension.  
B. Increased urination.  
C. Xerostomia.  
D. Confusion.

Nitrous oxide

- A. may supplement behavioural management of an anxious patient.  
B. is a substitute for behavioural management of an anxious patient.  
C. is a substitute for local anesthesia for a dental extraction.  
D. would have no analgesic effect at a dose of 60%.

Epinephrine should be administered immediately in which of the following emergencies?

- A. A severe angina attack.  
B. A mild asthmatic attack.  
C. Severe anaphylaxis.  
D. Severe hypotension.

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Following administration of a posterior superior alveolar nerve block, a hematoma occurs. Which of the following statements is correct?

- A. The formation of this hematoma indicates poor injection technique.
- B. This nerve block is not commonly associated with hematoma formation.
- C. Management of this hematoma includes immediate application of heat for at least the first 6 hours.
- D. The patient may experience trismus the next day.

Local anesthetic injected into dental abscesses is rarely effective because

- A. bacteria can metabolize the local anesthetic.
- B. edema dilutes the local anesthetic.
- C. the tissue is too acidic.
- D. there is excessive vasoconstriction.

Which of the following can increase the chances of successful osseointegration of a dental implant?

- 1. An atraumatic surgical approach.
  - 2. The availability of dense cancellous bone.
  - 3. A good initial stability of the implant.
  - 4. Immediate loading of the implant.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

If a polyvinyl siloxane material is used to make the final impression for a maxillary cast restoration, the impression tray must

- 1. be rigid.
  - 2. have occlusal stops.
  - 3. be coated with an appropriate adhesive.
  - 4. cover the hard palate.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following is/are (an) acceptable mean(s) to obtain the gingival retraction that is needed when using an elastomeric impression material for making a final impression in fixed prosthodontics?

- 1. Electrosurgery.
  - 2. A moist retraction cord.
  - 3. A copper band that is removed when the impression is made.
  - 4. Using a heavy body material in the impression tray.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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Which of the following could cause phonetic problems for patients with removable dentures?

1. Posterior teeth placed in a buccal position.
2. Excessive bulk in the palatal area.
3. Anterior teeth that are too long.
4. Advanced ridge resorption.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following has analgesic, antipyretic and anti-inflammatory effects?

- A. Acetaminophen.
- B. Acetylsalicylic acid.
- C. Bradykinin.
- D. Diazepam.

The vibrating line of the palate is

1. always on the hard palate.
2. an area which marks the movement of the soft palate.
3. easily located on a cast.
4. a useful landmark in complete denture fabrication.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The direct immunofluorescence pattern seen in pemphigus vulgaris has been described as

- A. target-like.
- B. chicken wire.
- C. soap-bubble.
- D. corrugated.
- E. cotton wool.

Overhangs on restorations predispose

1. enhanced plaque retention.
2. restricted plaque removal.
3. enhanced food retraction.
4. increased caries susceptibility.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Amphetamines

1. increase mental alertness.
2. increase salivation.
3. decrease fatigue.
4. are useful in controlling arrhythmias.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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An Angle Class II dental malocclusion in the mixed dentition will most likely

- A. develop into an Angle Class I malocclusion with normal exfoliation of the primary molars.
- B. worsen with forward growth of the maxilla.
- C. develop into an Angle Class I malocclusion with late mandibular growth.
- D. develop into a skeletal malocclusion with growth of the maxilla and mandible.
- E. not change as the maxilla and mandible grow.

The primary purpose(s) of relining a distal extension base of a removable cast framework partial denture is/are to improve

- 1. fit of the framework.
  - 2. occlusion.
  - 3. function.
  - 4. tissue adaptation.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The primary stress bearing area of the maxillary complete denture is the

- A. hard palate.
- B. alveolar ridge.
- C. soft palate.
- D. zygoma.

Possible side effects of therapeutic doses of codeine are

- 1. constipation.
  - 2. drowsiness.
  - 3. nausea.
  - 4. respiratory depression.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The primary retention of a Class II gold inlay is achieved by

- 1. adding an occlusal dovetail.
  - 2. increasing the parallelism of walls.
  - 3. lengthening the axial walls.
  - 4. placing a gingival bevel.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The tooth preparation for a porcelain veneer must have a

- 1. rough surface.
  - 2. space for the veneer material.
  - 3. definite finish line.
  - 4. margin at least 1mm supragingivally.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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A bite-wing radiograph of tooth 1.4 reveals caries penetrating one third into the mesial enamel. The most appropriate management of tooth 1.4 is to

- A. place an amalgam restoration.
- B. place a porcelain inlay.
- C. place a direct composite restoration.
- D. apply fluoride and improve oral hygiene.

Which of the following should be performed to confirm a diagnosis of pseudomembranous candidiasis?

- A. An incisional biopsy.
- B. A cytological smear.
- C. An excisional biopsy.
- D. A complete blood count.

Enamel pearls form when

- A. ameloblasts migrate apically down the root.
- B. cells of the epithelial root sheath do not migrate away from the dentin.
- C. cells of the dental follicle fail to develop.
- D. epithelial rests transform into ameloblast vesicles.

A 50 year old patient, who is a heavy smoker, has developed a barrel chest, has difficulty breathing and has a bluish tinge to his complexion. The most likely diagnosis is

- A. emphysema.
- B. acute upper respiratory infection.
- C. primary cancer of the lung.
- D. cardiac insufficiency.

The small bubble normally seen in a local anesthetic cartridge is

- A. nitrogen.
- B. air.
- C. oxygen.
- D. a breakdown product.

For which of the following is nystatin oral suspension an appropriate treatment?

- A. Herpetic gingivostomatitis.
- B. Nicotinic stomatitis.
- C. Denture stomatitis.
- D. Aphthous stomatitis.

A vital canine is to be used as the anterior abutment of a four unit fixed partial denture and it has 2.0mm remaining coronal tooth structure. The most acceptable foundation restoration would be

- A. bonded amalgam core build-up.
- B. a pin retained amalgam core build-up.
- C. a pin retained composite resin core build-up.
- D. intentional devitalization followed by a post and core restoration.

The tooth preparation for a porcelain veneer must have a

- 1. coarse diamond finish.
  - 2. space for the veneer material.
  - 3. margin at least 1mm supragingivally.
  - 4. definite gingival finish line.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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The most appropriate antibiotic for a patient with an odontogenic infection and a history of penicillin allergy is

- A. methicillin.
- B. clindamycin.
- C. tobramycin.
- D. tetracycline.

In comparison to visible light, X-rays

- A. have a longer wave length.
- B. have higher energy.
- C. travel faster.
- D. can be focused.

The purpose of phenidone in radiographic developing solution is to chemically

- A. oxidize silver halide to metallic silver in the emulsion.
- B. reduce silver halide to metallic silver in the emulsion.
- C. remove silver halide from the emulsion that has been exposed to radiation.
- D. remove silver halide from the emulsion that has not been exposed to radiation.

A patient is currently on warfarin. Before a planned extraction of tooth 3.4, the patient's coagulation mechanism should be evaluated using which test?

- A. Bleeding time.
- B. Partial thromboplastin time.
- C. Prothrombin time or INR.
- D. Von Willebrand's Factor.

Dental implants are CONTRAINDICATED in patients who

- 1. are over age 80.
- 2. have unrepaired cleft palates.
- 3. are taking anticoagulants.
- 4. have uncontrolled diabetes mellitus.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

For an acid-etched Class III composite resin, the cavosurface margin of the cavity can be bevelled to

- 1. eliminate the need for internal retention.
- 2. improve convenience form.
- 3. aid in finishing.
- 4. increase the surface area for etching.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

An altered cast impression technique for free-end extension mandibular partial denture cases is done primarily to

- 1. capture soft tissue in a supporting form.
- 2. capture the retromylohyoid area.
- 3. prevent displacement of the retromolar pad.
- 4. allow jaw relation records to be made simultaneously with impression making.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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On T<sub>1</sub>-weighted magnetic resonance images, the tissue that has the highest intensity is

- A. blood.
- B. fat.
- C. skeletal muscle.
- D. cortical bone.

During periodontal disease activity, the loss of clinical attachment

- A. precedes alveolar bone loss.
- B. follows alveolar bone loss.
- C. is concomitant with alveolar bone loss.

Which of the following is the best predictor for successful periodontal flap surgery?

- A. Position of the flap after suturing.
- B. Extent of flap reflection.
- C. Level of plaque control.
- D. Type of initial incision.

A pontic should

- A. exert no pressure on the ridge.
- B. be contoured by scraping the master cast.
- C. have a large surface area in contact with the ridge.
- D. contact nonkeratinized tissue.

A child on antibiotic therapy would be more likely to develop

- A. herpangina.
- B. pemphigus.
- C. candidiasis.
- D. herpetic gingivostomatitis.

The primary stimulus for growth of the mandible is

- 1. genetic.
- 2. epigenetic.
- 3. functional.
- 4. environmental.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In determining the ideal proximal outline form for a Class II amalgam cavity preparation in a molar the

- 1. axial wall should be 1.5mm deep.
- 2. gingival cavosurface margin must clear contact with the adjacent tooth.
- 3. proximal walls diverge occlusally.
- 4. facial and lingual proximal cavosurface margins must just clear contact with the adjacent tooth.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which thermal property is most important in selecting a restorative material to protect the pulp from excessive temperature changes?

- A. conductivity.
- B. diffusivity.
- C. expansion coefficient.
- D. modulus.

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Voids on a dental cast could be caused by the high

- A. surface tension of a silicone impression material.
- B. surface tension of an irreversible hydrocolloid.
- C. wettability of the dental stone.
- D. wettability of the impression material.

The yield strength of an orthodontic wire is

- A. the same as the proportional limit.
- B. decreased by work hardening.
- C. the same as the stress at fracture.
- D. higher than the proportional limit.

A patient wearing complete dentures complains of tingling and numbness in the lower lip bilaterally. This is often an indication of

- A. allergy to denture base material.
- B. impingement of denture on the mandibular nerve.
- C. defective occlusal contacts.
- D. impingement of denture on the mental nerve.
- E. neoplastic invasion of the inferior mandibular nerve.

A dental radiograph will accurately indicate

- A. periodontal pocket depth.
- B. the height of the bone on the facial surfaces of the teeth.
- C. the extent of furcation involvements.
- D. infrabony pocket topography.
- E. None of the above.

One week after receiving a complete denture a patient returns with an isolated sore spot. The most likely cause is

- A. incorrect vertical dimension.
- B. localized pressure.
- C. an inaccurate centric relation record.
- D. decreased tissue tolerance.

The preparation of an anterior tooth for a metal-ceramic crown should provide

- 1. adequate length for retention and resistance form.
- 2. space for thickness of metal that will resist deformation.
- 3. space for thickness of porcelain.
- 4. a single path of insertion.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following teeth is most likely to have two roots and two canals?

- A. Maxillary second premolar.
- B. Mandibular second premolar.
- C. Maxillary first premolar.
- D. Mandibular first premolar.

Which permanent maxillary molar root has a higher incidence of two canals?

- A. Distobuccal root of the first molar.
- B. Distobuccal root of the second molar.
- C. Mesiobuccal root of the first molar.
- D. Mesiobuccal root of the second molar.

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The most appropriate way to disinfect gutta-percha cones prior to obturation is to

- A. immerse in a 5.25% sodium hypochlorite solution.
- B. immerse in ethyl alcohol.
- C. autoclave for a full cycle.
- D. wipe with an alcohol soaked gauze.

Which statement is FALSE regarding the use of a barbed broach? It is used for

- A. removal of vital or nonvital pulp tissue.
- B. removal of food debris from the canal.
- C. removal of paper points and cotton pellets.
- D. removal of gutta-percha during nonsurgical retreatment.

Which of the following applies to gutta-percha?

- A. It can be softened by heat.
- B. It is a good thermal conductor.
- C. It can be inserted easily into fine canals.
- D. It is resorbable.

Following radiation therapy to the mandible, extraction of mandibular teeth is most likely to result in

- A. fracture.
- B. actinomycosis.
- C. osteomyelitis.
- D. soft tissue necrosis.
- E. development of malignancy.

Which of the following drugs should NOT be administered to a patient in order to alleviate symptoms of an acute asthmatic attack?

- A. Isoproterenol.
- B. Metaproterenol.
- C. Epinephrine.
- D. Hydrocortisone.

Tetracycline therapy instituted either in the second trimester or post partum to the infant is responsible for all the following EXCEPT

- A. discolouration of deciduous teeth and permanent teeth.
- B. minor changes in the hydroxyapatite of the enamel.
- C. predisposing the infant to candidal infections.
- D. forming a complex with the developing tooth material.

Which one of the following factors is LEAST important in determining the appropriate dose of drug for a patient?

- A. Weight.
- B. Medical history.
- C. Age.
- D. Gender.

Which of the following nerves does NOT require anesthesia for the extraction of a permanent maxillary first molar?

- A. Greater palatine.
- B. Nasopalatine.
- C. Middle superior alveolar.
- D. Posterior superior alveolar.

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All of the following are signs of occlusal trauma EXCEPT

- A. tooth mobility.
- B. tooth sensitivity.
- C. radiographic evidence of increased periodontal ligament space.
- D. loss of pulp vitality.

A small hinge articulator was used for the fabrication of a cast gold onlay for tooth 4.6. Which of the following movements will result in the greatest discrepancy between the articulator and the patient?

- A. Laterotrusive.
- B. Mediotrusive.
- C. Protrusive.
- D. Retrusive.

Accessory root canals develop because root odontoblasts fail to

- A. produce matrix.
- B. survive.
- C. divide.
- D. differentiate.

Abnormal development of the first pharyngeal arch may produce defects in the

- A. zygomatic bones and the external ears.
- B. mandible and the external nose.
- C. maxilla and the muscles of facial expression.
- D. palate and the hyoid bone.

In an x-ray tube, electron emission occurs at the

- A. focusing cup.
- B. filament.
- C. target.
- D. anode.

Which of the following does NOT describe the energy of x-ray photons exiting the x-ray unit?

- A. Normally distributed.
- B. Mono-energetic.
- C. Proportional to frequency.
- D. Inversely proportional to wavelength.

The first drug used for the management of anaphylaxis is

- A. atropine.
- B. diphenhydramine.
- C. epinephrine.
- D. hydrocortisone.
- E. nitroglycerin.

Which of the following should NOT be administered to a patient with chest pain consistent with a myocardial infarction?

- A. Epinephrine.
- B. Nitroglycerin.
- C. Oxygen.
- D. Morphine.
- E. Acetylsalicylic acid.

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During general anesthesia, all of the following should be monitored EXCEPT

- A. pupil diameter.
- B. blood pressure.
- C. heart rate.
- D. oxygen saturation.
- E. respiratory rate.

Which of the following local anesthetics is classified as an ester?

- A. Articaine.
- B. Bupivacaine.
- C. Lidocaine.
- D. Mepivacaine.
- E. Procaine.

Local anesthetic containing epinephrine is CONTRAINDICATED for a patient with

- A. Addison's disease.
- B. congenital methemoglobinemia.
- C. diabetes mellitus.
- D. pseudocholinesterase deficiency.
- E. sulfite sensitivity.

Acetylsalicylic acid should be avoided in each of the following EXCEPT

- A. gastric ulcer.
- B. gout.
- C. severe asthma.
- D. hyperlipidemia.
- E. type 2 diabetic.

The full palatal major connector is indicated where

- A. there is a high, narrow palatal vault.
- B. a well-defined, undercut palatal torus is present.
- C. very few teeth remain in a flat or U-shaped arch.
- D. palatal tissue is soft and compressible.

Following the administration of a right inferior alveolar nerve block, right facial paralysis is noted. This condition was caused by inadvertent injection into the

- A. pterygopalatine fossa.
- B. facial canal.
- C. parotid gland.
- D. submandibular region.
- E. sublingual gland.

A 45 year old patient has 32 unrestored teeth. The only defects are deeply stained grooves in the posterior teeth. Clinical examination reveals no evidence of caries in the grooves. The most appropriate management is

- A. application of pit and fissure sealants.
- B. preventive resin restorations.
- C. conservative Class I amalgams.
- D. prophylactic odontotomy.
- E. no treatment.

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For a cast gold restoration, a gingival bevel is used instead of a shoulder because a bevel

1. protects the enamel.
2. increases retention.
3. improves marginal adaptation.
4. increases the thickness of gold.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following drugs controls and reduces inflammation?

- A. Codeine.
- B. Acetaminophen.
- C. Ibuprofen.
- D. Meperidine HCl.

A 4 year old child presents for an emergency examination. The mother is concerned about white patches on the child's tongue. The child has no pain, eats and drinks normally and has a history of repeated use of amoxicillin for otitis media. What is the most likely diagnosis?

- A. Primary herpetic gingivostomatitis.
- B. Geographic tongue.
- C. Candidiasis.
- D. Hairy tongue.

Which of the following is a CONTRAINDICATION for placement of a fissure sealant on a permanent molar?

- A. Tooth erupted more than one year.
- B. Deep, narrow fissures.
- C. Inadequate moisture control.
- D. Community water supply fluoridated at 1.0ppm.

The mesial furcation of maxillary permanent first molars is best probed from the

- A. buccal.
- B. buccal or lingual.
- C. lingual.

Non-steroidal anti-inflammatory drugs, such as ketoralac, are beneficial in the treatment of periodontal disease because they

- A. stimulate cyclo-oxygenase activity.
- B. reduce prostaglandin E<sub>2</sub> synthesis.
- C. promote wound healing.

The youngest age at which tetracycline ingestion will NOT cause discolouration of any tooth crowns except third molars is

- A. 6 months in utero.
- B. 5 years.
- C. 10 years.
- D. 15 years.

Which of the following materials is most likely to initiate a hypersensitivity reaction?

- A. Titanium.
- B. Gold.
- C. Nickel-chromium.
- D. Chrome-cobalt.
- E. Silver amalgam.

Polyvinylsiloxane impression materials have high

- A. polymerization shrinkage.
- B. dimensional stability.
- C. by-product formation.
- D. linear expansion.

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Incomplete tooth fracture

- A. can readily be diagnosed using transillumination.
- B. most commonly involves the supporting cusps.
- C. is associated with medium to large-sized restorations.
- D. elicits dull, prolonged pain on chewing.

Metronidazole has been prescribed for a patient taking warfarin daily for the last 2 years. Which of the following must be closely monitored?

- A. Platelet count.
- B. Hematocrit.
- C. Bleeding time.
- D. INR.

The etiologic agent for necrotizing ulcerative gingivitis (NUG) is

- A. bacterial.
- B. viral.
- C. fungal.
- D. protozoan.

Systemic antibiotics may be indicated for patients presenting with generalized

- A. chronic periodontitis.
- B. aggressive periodontitis.
- C. gingivitis.
- D. gingival hyperplasia.

Acute anaphylactic reactions to penicillin are LEAST likely to occur

- A. in patients with a negative skin test to penicillin.
- B. within minutes after drug administration.
- C. in patients who have already experienced an allergic reaction to the drug.
- D. when the drug is administered parenterally.

Which of the following is the most likely cause of osteoporosis, glaucoma, hypertension and peptic ulcers in a 65 year old with Crohn's disease?

- A. Uncontrolled diabetes.
- B. Systemic corticosteroid therapy.
- C. Chronic renal failure.
- D. Prolonged NSAID therapy.
- E. Malabsorption syndrome.

A 60 year old patient in chronic renal failure has bilateral radiolucent mandibular lesions. Histological analysis reveals that these are giant cell lesions. This patient should be evaluated for

- A. hyperparathyroidism.
- B. hyperthyroidism.
- C. hyperpituitarism.
- D. hypoparathyroidism.

A surgical flap for the extraction of a tooth should be designed to

- A. avoid attached gingiva.
- B. remain coronal to the mucogingival junction.
- C. be partial thickness.
- D. have a wide base.

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A periodontal screening and recording (PSR) score of 3 for a sextant indicates that probing depth does NOT exceed

- A. 3.0mm.
- B. 3.5mm.
- C. 4.0mm.
- D. 5.5mm.
- E. 6.0mm.

Facial paralysis following an inferior alveolar nerve block is a result of injecting the solution too far

- A. inferiorly.
- B. superiorly.
- C. posteriorly.
- D. anteriorly.

Which of the following occurs when epinephrine is administered intravenously?

- A. Decrease in diastolic pressure.
- B. Decrease in glycogenolysis.
- C. Increase in arrhythmias.
- D. Increase in muscular contractility.

An oroantral communication occurs

- A. more often with the removal of maxillary second premolars.
- B. less often when the maxillary sinus has pneumatized into the alveolus.
- C. more often with the removal of maxillary first molars.
- D. less often in elderly patients.

The antithrombotic effects of aspirin may be compromised by

- A. codeine.
- B. acetaminophen.
- C. ibuprofen.
- D. tramadol.

The daily maximum dose of ibuprofen for an adult is

- A. 1,200 mg.
- B. 1,600 mg.
- C. 2,000 mg.
- D. 2,400 mg.

During the administration of local anesthesia, positive aspiration of blood will occur most often in a/an

- A. mental or incisive block.
- B. posterior superior alveolar block.
- C. inferior alveolar block.
- D. anterior superior alveolar block.
- E. long buccal nerve block.

A patient presents with pain from tooth 4.7 which is an abutment for a 4 unit bridge from 4.4 to 4.7. Clinical and radiographic examinations reveal tooth 4.7 has extensive distal caries and apical rarefying osteitis. The most appropriate initial management is to

- A. prescribe an antibiotic and an analgesic and reappoint the patient.
- B. perform endodontic therapy through the 4.7 crown.
- C. section the bridge at 4.4, remove 4.7 crown and assess 4.7.
- D. remove entire bridge and assess restorability of abutments.

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Naloxone reverses respiratory depression caused by

- A. meperidine.
- B. lorazepam.
- C. alcohol.
- D. phenobarbital.

During dental treatment, a 45 year old male patient complains of a tight constriction of his chest, becomes pale and sweaty, feels nauseous and attempts to vomit. The most likely diagnosis is

- A. pulmonary embolus.
- B. stroke.
- C. pneumonia.
- D. myocardial infarction.

When performing a frenectomy, a minimal amount of anesthetic solution is used to prevent

- A. distortion of the tissues.
- B. sloughing.
- C. secondary bleeding.
- D. irritation.

In a normally developing occlusion, spaces between primary incisors are called

- A. physiological spaces.
- B. primate spaces.
- C. leeway spaces.
- D. freeway spaces.

Which of the following impression materials is the LEAST flexible when set?

- A. Polyvinyl siloxane.
- B. Condensing silicone.
- C. Polyether.
- D. Polysulfide.

In which of the following situations can topical corticosteroids be used?

- A. Angular cheilitis.
- B. Candidiasis.
- C. Herpes labialis.
- D. Erosive lichen planus.
- E. Necrotizing ulcerative gingivitis.

What should be the immediate management of an acute anginal episode?

- A. Oral ibuprofen.
- B. Sublingual nitroglycerin.
- C. Subcutaneous epinephrine.
- D. Inhaled salbutamol.

For acute dental pain, the daily maximum cumulative dose of acetylsalicylic acid is

- A. 2,400 mg.
- B. 3,200 mg.
- C. 3,600 mg.
- D. 4,000 mg.

All the following medications can be used for the treatment of *Candida albicans* EXCEPT

- A. nystatin.
- B. fluconazole.
- C. chlorhexidine.
- D. amoxicillin.

Which of the following is the most appropriate management for a tooth displaying crazing of the enamel?

- A. Splinting of teeth.
- B. Stainless steel band.
- C. Endodontic treatment.
- D. Periodic observation.

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The most efficient cutting instrument used during endodontic procedures is a

- A. barbed broach.
- B. reamer.
- C. k-type file.
- D. Hedstrom file.

Pulpotomy is the treatment of choice in carious pulp exposures of

- A. asymptomatic vital teeth with completely formed apices.
- B. asymptomatic vital teeth with incompletely formed apices.
- C. asymptomatic necrotic teeth with completely formed apices.
- D. asymptomatic necrotic teeth with incompletely formed apices.

Following the removal of a vital pulp, the root canal is medicated and sealed. The patient returns with apical periodontitis. The most common cause is

- A. over-instrumentation.
- B. lateral perforation.
- C. pulp tissue left in the root canal.
- D. infection.

Which of the following lesions is most likely to occur in the floor of the mouth?

- A. Pleomorphic adenoma.
- B. Mucoepidermoid carcinoma.
- C. Lymphangioma.
- D. Ranula.
- E. Granular cell myoblastoma.

For an adult patient, the recommended time interval between bitewing radiographic examination for the detection of dental caries is

- A. 6 months.
- B. 12 months.
- C. 24 months.
- D. dependent upon caries risk.

Oral peripheral giant cell lesions of the periodontium are most likely

- A. non-neoplastic granulomatous lesions.
- B. precursors of sarcoma.
- C. malignant neoplasms.
- D. benign neoplasms.
- E. tuberculomas.

Percussion of a tooth is used to evaluate all of the following EXCEPT

- A. ankylosis.
- B. occlusal trauma.
- C. periapical status.
- D. pulpal status.

The oral examination of the edentulous patient should include digital palpation because

1. the thickness of the mucosa can better be evaluated.
2. undercut areas may be hard to visualize.
3. spicules under the mucosa may be overlooked.
4. the arch form can be more accurately evaluated

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Proper collimation of the useful beam for the film size and target-film distance will reduce the

1. intensity of central beam.
  2. secondary radiation.
  3. radiographic contrast.
  4. radiation received by patient.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The purpose of using intensifying screens in extra-oral radiography is to

- A. improve resolution.  
B. decrease exposure time.  
C. decrease scatter radiation.  
D. increase sharpness.

The function of the fixer solution is to

1. harden the emulsion.
  2. convert the latent image to black metallic silver.
  3. remove unexposed silver halide.
  4. continue the action of the developer.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

What could cause an area on an analog radiograph to be darker?

1. Increased processing time.
  2. Reduced attenuation of the X-ray beam in the patient.
  3. Increased exposure time.
  4. Reduced deposition of metallic silver on the emulsion.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following cysts is most likely to undergo transformation into an ameloblastoma?

- A. Radicular.  
B. Dentigerous.  
C. Fissural.  
D. Traumatic.

Which of the following bone lesions of the mandible is/are malignant?

1. Osteosarcoma.
  2. Osteochondroma.
  3. Ewing's tumor.
  4. Fibrous dysplasia.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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Root resorption may be associated with

1. excessive orthodontic forces.
  2. periapical granuloma.
  3. traumatic injury.
  4. periapical osseous dysplasia (periapical cemento-osseous dysplasia).
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A radicular cyst

- A. enlarges rapidly.  
B. infiltrates bone.  
C. contains fluid.  
D. is associated with a vital tooth.

Compared to the bisecting angle technique, the paralleling technique will result in a

1. reduced dose to the thyroid gland.
  2. increased magnification of the image.
  3. reduced distortion of the image.
  4. increased penumbra of the image.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A syphilitic gumma is most commonly found on the

- A. lip.  
B. tongue.  
C. palate.  
D. buccal mucosa.  
E. gingiva.

Radiographically, the nasopalatine foramen may be mistaken for

1. an incisive canal cyst.
  2. a simple bone cyst/traumatic bone cyst.
  3. a radicular cyst.
  4. a naso-alveolar cyst.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A periradicular granuloma can be differentiated from a periradicular cyst by the

- A. radiographic appearance.  
B. patient's symptoms.  
C. response to percussion testing.  
D. results of the biopsy.

Which of the following tests can be used to determine the pulp status of a tooth with an all-ceramic crown?

- A. Cold test with ethyl chloride spray.  
B. Electric pulp test.  
C. Cold test with ice stick.  
D. Heat test.

A 2cm, discrete, white lesion of the buccal mucosa has not resolved after elimination of all local irritants. The most appropriate management is to

- A. cauterize it.  
B. apply toluidine blue staining.  
C. perform an incisional biopsy.  
D. re-examine at 6 month intervals.  
E. refer patient to family physician.

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Healing of extraction wounds is sometimes complicated by a condition known as a "dry socket". In this condition

- A. no fibrin is formed in the extraction socket.
- B. routine use of antibiotics is advised as a prophylactic measure.
- C. a focal osteomyelitis exists in which the clot has disintegrated.
- D. healing is painful but not delayed.

In general anaesthesia, the last part of the CNS (Central Nervous System) to be depressed is the

- A. medulla.
- B. oblongata.
- C. midbrain.
- D. cerebellum.
- E. spinal cord.

The psychomotor recovery time from nitrous oxide sedation is

- A. immediate.
- B. 1 to 2 minutes.
- C. 10 minutes.
- D. 30 minutes.

When a patient has a history of porphyria, which of the following drugs is CONTRAINDICATED for pharmacosedation?

- A. Minor tranquilizers.
- B. Antihistamines.
- C. Barbiturates.
- D. Opioids.

A patient has a proven allergy to para-amino benzoic acid derivatives. Which local anesthetic solution can be used safely?

- A. Procaine.
- B. Benzocaine.
- C. Tetracaine.
- D. Lidocaine.

Which of the following is most likely related to the administration of excessive vasoconstrictor?

- A. Flushing of the skin and tremors.
- B. Sudden pallor, sweating, weak but regular pulse, occasional loss of consciousness.
- C. Convulsions and loss of consciousness.
- D. Tachycardia, palpitations, headache, cardiac arrhythmia, elevated blood pressure.

An ankylosed deciduous molar can cause

1. delayed eruption of the underlying premolar.
2. reduction of arch length.
3. difficulty with extraction.
4. reduction in alveolar bone.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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The eruption of a permanent central incisor may be delayed by

1. a supernumerary tooth.
  2. dense fibrous tissue.
  3. a retained deciduous incisor.
  4. early loss of a deciduous incisor.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following is correct with respect to the hand-wrist radiograph?

- A. Skeletal age may be estimated by comparing the image to a standard.  
B. It provides a precise measure of skeletal development.  
C. It is of minimal value in orthodontic diagnosis.  
D. It is only determinate of skeletal age.

Which of the following patients should be referred to orthodontically close a maxillary midline diastema?

1. An 8 year old with no abnormal oral habits.
  2. A 14 year old with no abnormal oral habits.
  3. A 3 year old with a 4mm overjet.
  4. An 8 year old with a previous thumb habit.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The developing permanent tooth

1. lies apically and lingually to primary teeth in the anterior region.
  2. may show deviated eruption times if the primary tooth is lost prematurely.
  3. has a more protrusive path of eruption in the anterior region.
  4. usually erupts earlier in girls.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The primate spaces are located between the

1. maxillary canines and lateral incisors.
  2. maxillary canines and first molars.
  3. mandibular canines and first molars.
  4. mandibular canines and lateral incisors.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

If a child's teeth do NOT form, the primary effect will be on the growth of the

- A. alveolar bone.  
B. mandible.  
C. maxilla.  
D. palate.

An overjet of 8mm is most often associated with

- A. Class I cuspid relationship.  
B. Class II cuspid relationship.  
C. Class III cuspid relationship.

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The most significant factor in the predictable correction of an anterior crossbite is the

- A. patient age.
- B. overbite.
- C. tooth shape.
- D. mesio-distal spacing.

Inadequate space for the eruption of the maxillary second premolar is most frequently caused by the premature loss of the deciduous

- A. first molar.
- B. second molar.
- C. central incisor.
- D. canine.

Correction of an Angle Class II, division 1 malocclusion has the best prognosis when the

1. maxillary incisors are tipping labially.
  2. skeletal bases are harmonious.
  3. dentition is mildly crowded or spaces.
  4. lower face height is long.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Loops and helices in orthodontic arches result in

1. a decreased level of force application.
  2. a greater range of activation.
  3. improved tissue response.
  4. easier insertion.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

"Dental age" is defined as the

- A. stage of dental maturation.
- B. eruption time of a given tooth.
- C. number of years elapsed since a given tooth has erupted.

A crossbite of a maxillary central incisor is most appropriately treated

- A. following eruption of the maxillary permanent canines.
- B. following eruption of the maxillary permanent central incisors.
- C. following eruption of the maxillary permanent lateral incisors.
- D. during the eruption of the maxillary permanent central incisors.

Bone laid down by the periosteum is

- A. endochondral.
- B. cartilaginous.
- C. appositional.
- D. cancellous.

The severity of an Angle's Class II malocclusion may be reduced by

1. maintaining the integrity of the primary dentition.
  2. preventing thumbsucking and lip biting habits.
  3. correcting mouth breathing as early as possible.
  4. the strategic removal of primary teeth.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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Thumbsucking does NOT usually affect the permanent dentition if the habit is

- A. discontinued before four years of age.
- B. discontinued before eight years of age.
- C. associated with sleeping.
- D. is of low intensity.

The most common etiology of an Angle's Class I malocclusion is

- A. unusual dental arch development.
- B. tooth size - arch size discrepancy.
- C. congenitally missing teeth.
- D. extra teeth.

Fluorides taken systemically are

- 1. excreted in the urine.
  - 2. deposited in teeth.
  - 3. deposited in bone.
  - 4. deposited in the nails.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Trauma from occlusion may be diagnosed radiographically by the presence of

- A. cemental tears.
- B. horizontal bone loss.
- C. widening of the periodontal ligament space.
- D. narrowing of the periodontal ligament space.

The most important diagnostic element in assessing the periodontal status of a patient is the

- A. results of vitality testing.
- B. depth of periodontal pockets.
- C. mobility of the teeth.

In comparing polysulfide, polyether and addition cured silicone impression materials, which of the following statements is true?

- A. All three of the materials contract slightly during curing.
- B. All three of the materials expand slightly upon cooling from mouth temperature (37°C) to room temperature (20°C).
- C. After one week, addition cured silicones will undergo more distortion than polysulfides.
- D. Lead oxide is used as an activator in silicones.

In minimizing the firing shrinkage of porcelain, the principal factor is the

- A. fusion temperature.
- B. ratio of flux to feldspar.
- C. uniformity of particle size.
- D. thoroughness of condensation.

Zinc-oxide-eugenol cements are less soluble than

- A. zinc phosphate cements.
- B. Bis-GMA resin cements.
- C. glass ionomer cements.
- D. calcium hydroxide cements.

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A removable partial denture is preferable to a fixed bridge when the

- A. edentulous areas are large.
- B. abutment teeth have large undercuts.
- C. abutment teeth are rotated.
- D. abutment teeth are tipped.
- E. residual ridges are severely resorbed.

In treatment planning for a removable partial denture, a knife-edge bony ridge will

- A. make impression-making difficult.
- B. necessitate relief to the partial denture.
- C. cause difficulty in tooth selection.

To ensure the greatest accuracy, polysulfide base impressions should be poured

- A. within 10 minutes.
- B. within 1 hour.
- C. within 8 hours.
- D. after 24 hours.

Papillary hyperplasia on the palate of a patient wearing a maxillary complete denture is most likely to be associated with

- A. heavy smoking.
- B. an allergy to the acrylic resin.
- C. an ill-fitting denture and poor oral hygiene.
- D. occlusion with posterior natural teeth.

An occlusal rest preparation should be

- A. angular and box shaped with parallel vertical walls.
- B. rounded and spoon shaped.
- C. flat and with an obtuse angle to the proximal surface of the tooth.

The purpose of a temporary restoration in an anterior tooth is to

- 1. maintain aesthetics.
- 2. protect dentin and pulp.
- 3. prevent gingival inflammation and recession.
- 4. prevent tooth movement.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The polymerization of methyl methacrylate is

- A. endothermic.
- B. hydrophilic.
- C. hydrolytic.
- D. exothermic.

In a fixed bridge, the most favorable ratio for an abutment tooth is when the root

- A. and clinical crown are equal in length.
- B. is twice the length of the clinical crown.
- C. is half the length of the clinical crown.

Speech defects associated with a maxillary partial denture can be caused by

- 1. replacing the teeth too soon after extraction.
- 2. providing excessive bulk of denture base.
- 3. posterior palatal extension too far posteriorly.
- 4. positioning anterior teeth incorrectly.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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The major connector of a removable partial denture should be designed to

- A. connect rigidly the component parts of the partial denture.
- B. act as a stress-breaker.
- C. dissipate vertical forces.

Which of the following problems of a permanent fixed bridge, detected at the delivery appointment, can be caused by an inadequate temporary restoration?

- 1. Hypersensitivity of the abutments that decreases after permanent luting.
  - 2. Exposed gingival margins in an area.
  - 3. Contacts with adjacent teeth that prevent complete seating of the bridge.
  - 4. Need for significant occlusal adjustment.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The use of a retraction cord impregnated with 8% racemic epinephrine may be hazardous for some patients because of its

- A. local caustic action on the gingival tissue.
- B. potential for systemic reaction.
- C. local astringent action.

The interocclusal distance (freeway space)

- A. is the difference between occlusal vertical dimension and hinge axis registration.
- B. is the difference between occlusal vertical dimension and rest vertical dimension.
- C. is usually 10mm in the premolar region.
- D. is the distance between centric occlusion and centric relation.

Prior to cementing an onlay in a vital tooth using a resin cement, the application of cavity varnish will

- A. protect the pulp.
- B. improve seal.
- C. reduce prevent postoperative sensitivity.
- D. reduce bond strength.
- E. reduce microleakage.

In a removable partial denture, the major connector should begin 3-6mm from the free gingival margin in order to

- A. improve phonetics.
- B. allow sufficient length for the minor connectors.
- C. prevent inflammation of the gingival tissues.
- D. prevent rotation of the major connector in an antero-posterior direction.

Cementing a full gold crown with zinc phosphate includes

- 1. applying a thick coat of cement internally.
  - 2. application of continuous loading.
  - 3. cleaning excess cement off while setting.
  - 4. having excess cement covering the margins.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

To decrease abutment tooth sensitivity, a fixed bridge may be temporarily seated using

- A. polycarboxylate cement.
- B. acrylic resin cement.
- C. zinc oxide eugenol cement.
- D. glass ionomer cement.

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Which of the following materials/techniques is CONTRAINDICATED when using polyvinyl siloxane impression materials?

- A. Displacement cords.
- B. Electrosurgery.
- C. Aluminum sulfate saturated cord.
- D. Aluminum chloride impregnated cord.

A circumferential clasp arm on a tooth is one which

- 1. originates above the height of contour.
  - 2. approaches the undercut from an occlusal direction.
  - 3. traverses a portion of the suprabulge of the tooth.
  - 4. extends more than 180° around the tooth.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Kilovoltage controls the

- 1. contrast of the image.
  - 2. quantity of X-rays produced.
  - 3. energy of the X-rays.
  - 4. temperature of the cathode filament.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

If an impression were taken with a polysulfide impression material of teeth exhibiting severe external undercuts a stone model should be poured

- A. immediately.
- B. after 30 minutes.
- C. after 24 hours.

For a patient with complete dentures, insufficient space between the maxillary tuberosity and the retromolar pad will require

- A. avoiding covering the pad with the mandibular base.
- B. not covering the tuberosity with the maxillary base.
- C. surgically reducing the retromolar pad.
- D. surgically reducing the maxillary tuberosity.

Following orthodontic alignment, relapse of the mandibular incisors CANNOT

- A. be predicted from characteristics of the original malocclusion.
- B. occur if the second or third molars are removed.
- C. occur if retainers are worn until the mandibular growth is complete.
- D. occur if a supracrestal fiberotomy is performed.

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Cleft palate may result in a higher incidence of

1. supernumerary teeth.
2. congenitally missing teeth.
3. altered crown morphology.
4. orthognathic surgery.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

When uprighting a molar to be used as a bridge abutment, consideration must be given to the

- A. local periodontium.
- B. vertical changes due to tipping of the molar.
- C. residual space for a pontic.
- D. use of fixed appliances for optimum control.
- E. All of the above.

In inhalation analgesia, what is the safe maximal nitrous oxide concentration that can be delivered?

- A. 50%.
- B. 60%.
- C. 70%.
- D. 80%.

Propylthiouracil is a drug used in the treatment of

- A. leukemia.
- B. hyperthyroidism.
- C. sodium retention.
- D. intestinal parasites.

Which of the following increases the sharpness of a radiograph?

- A. Small focal spot.
- B. Short focal spot-to-film distance.
- C. Long object-to-film distance.

In taking an interocclusal wax record in a protrusive position, the dentist should examine the wax record to insure that

- A. the incisal edges of the anterior teeth have made contact.
- B. the patient has not closed in a lateral position.
- C. all cusps have penetrated the wax record and are in contact with the opposing teeth.
- D. there is no perforation of the wax record.

Reduction of free way space in complete denture construction will

1. impair aesthetics.
2. cause the dentures to click.
3. traumatize the underlying supporting tissues.
4. induce generalized soreness over the ridges.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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The retention form of a full crown preparation can be improved by

1. reducing the taper.
2. increasing axial height.
3. utilizing grooves or boxes.
4. wider preparation margins.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In complete denture construction, a custom tray should be fabricated to ensure that

1. the flanges are not overextended.
2. the distal extension is adequate.
3. there is relief for muscle attachments.
4. the tray has adequate space for the impression material.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Longer trituration of alloy and mercury will result in an amalgam restoration which will have

- A. greater expansion during setting.
- B. reduced strength.
- C. increased flow.

Which permanent teeth will commonly be present in an 8 year old child?

- A. All central and lateral incisors.
- B. All central and lateral incisors and first molars.
- C. All central and lateral incisors, first molars and first premolars.
- D. Only mandibular central and lateral incisors and first molars.

Which of the following anesthetic agents are hydrolyzed by plasma cholinesterase?

- A. Prilocaine.
- B. Lidocaine.
- C. Mepivacaine.
- D. Procaine.

Sodium salicylate is administered to a patient with rheumatoid arthritis because it is a/an

- A. anti-inflammatory agent.
- B. sedative.
- C. antiseptic.
- D. antiplatelet agent.

Which of the following drugs is used in the treatment of *Candida albicans* infections?

- A. Penicillin.
- B. Nystatin.
- C. Chlorhexidine.
- D. Tetracycline.

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A 9 year old boy sustains a fracture of the crown of his central incisor with minimal pulp exposure. He is brought to your office within one hour of the injury. A periapical radiograph reveals that the apex is incompletely formed. The most appropriate management is

- A. pulp cap and restore.
- B. pulpotomy and seal temporarily.
- C. pulpectomy and seal temporarily.
- D. endodontic treatment.

Cephalometric standards

- 1. are racially biased.
  - 2. may vary with patient development.
  - 3. include a range of application.
  - 4. are the basis for diagnosis.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The ANB angle in severe Class II malocclusions is most often

- A. large.
- B. small.
- C. within normal limits.

The defining feature of a skeletal crossbite is

- A. coincident midlines.
- B. an interference free closure to maximal intercuspitation.
- C. a deviated closure to maximal intercuspitation.
- D. a large mandible.

Which of the following congenital problems often results in a malocclusion?

- 1. Cleft palate.
  - 2. Ectodermal dysplasia.
  - 3. Pierre Robin syndrome.
  - 4. Cleidocranial dysostosis.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which Angle's malocclusion is most commonly associated with mouth breathing?

- A. Class I.
- B. Class II, division 1.
- C. Class II, division 2.
- D. Class III.

Angle's "subdivision" refers to an abnormal molar relationship that is

- A. bilateral.
- B. unilateral.
- C. functional.
- D. transitional.
- E. traumatic.

Excessive force in orthodontic tooth movement is positively correlated with

- 1. faster movement.
  - 2. slower movement.
  - 3. root resorption.
  - 4. periodontal damage.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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The appliance of choice to correct an anterior crossbite is determined by the

- A. amount of overbite.
- B. age of the patient.
- C. cooperation of the patient.
- D. practitioner preference.

Serial extraction may result in

- 1. deepening of the overbite.
  - 2. lingual tipping of the mandibular incisors.
  - 3. regional extraction spacing.
  - 4. uncontrolled tipping of the permanent teeth.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The accuracy of alginate impression materials will be improved if

- A. the space between the tray and the teeth is 1-2mm.
- B. the space between the tray and the teeth allows 4-5mm of alginate.
- C. the impression is removed slowly from the undercuts around the teeth.
- D. the impression is soaked in water for 1 hour.

Which of the following methods decrease radiation exposure to patients?

- 1. Thyroid collar and lead apron.
  - 2. Rectangular collimation.
  - 3. High speed films.
  - 4. High kilovoltage.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

For teeth prepared as abutments for fixed bridges, unsatisfactory temporary crown restorations may result in

- 1. tooth sensitivity.
  - 2. gingival recession.
  - 3. tooth migration.
  - 4. occlusal prematurities.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A maxillary central incisor that is erupting in a lingually directed path should be

- A. corrected before it reaches the occlusal plane.
- B. allowed to erupt until all incisors can be banded.
- C. allowed to erupt into cross-bite and then corrected.
- D. ignored because pressures of the tongue will correct it as it erupts.
- E. ignored because pressures of the lip will cause the problem to recur.

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Which of the following constituents of a local anesthetic cartridge is most likely to be allergenic?

- A. Lidocaine.
- B. Epinephrine.
- C. Metabisulfite.
- D. Hydrochloric acid.

Acid etching of dentin with 10-15% phosphoric acid for 15-20 seconds

1. removes the smear layer.
  2. increases dentinal permeability.
  3. opens the dentinal tubules.
  4. decalcifies the intertubular and peritubular dentin.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A 12 year old male with a history of thumbsucking has an Angle Class II malocclusion with a SNA = 82° and a SNB = 80°. The most likely etiology is

- A. dental.
- B. skeletal.
- C. neuromuscular.
- D. dental and neuromuscular.
- E. skeletal and neuromuscular.

Which of the following impression materials has the best dimensional stability?

- A. Polysulfide rubber.
- B. Condensation silicone.
- C. Polyvinylsiloxane.
- D. Irreversible hydrocolloid.

The incidence of tooth loss due to periodontal disease is highest for

- A. maxillary molars.
- B. maxillary premolars.
- C. mandibular incisors.
- D. mandibular premolars.
- E. mandibular molars.

For a 20 year old, 80kg, patient with a confirmed allergy to codeine, which of the following is/are appropriate for pain control following the removal of an impacted third molar?

1. Hydromorphone, 2mg every 4 - 6 hours p.r.n.
  2. Ibuprofen, 800mg 1 hour pre-operatively followed by 400mg every 4 - 6 hours p.r.n.
  3. Acetaminophen, 650mg with oxycodone, 10mg every 4 - 6 hours p.r.n.
  4. Ketorolac, 10mg every 4 - 6 hours p.r.n.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Epstein-Barr virus is associated with which of the following?

1. Shingles.
  2. Oral hairy leukoplakia.
  3. Chickenpox.
  4. Infectious mononucleosis.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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Which of the following could be a complication when performing a dental extraction on an insulin-dependent diabetic patient?

- A. Diabetic acidosis.
- B. Increased bleeding.
- C. Hypoglycemic shock.
- D. Incomplete anesthesia.
- E. Acute adrenocortical insufficiency.

The most appropriate treatment for a vital primary molar with carious pulp exposure and cusp fracture is a/an

- A. pulp capping and amalgam restoration.
- B. pulpotomy and stainless steel crown.
- C. pulp capping and composite resin restoration.
- D. extraction and placement of a space maintainer.

The custom tray used in making a final complete denture impression must

- A. extend to the bottom of the vestibule.
- B. create adequate space for the impression material.
- C. have a horizontal handle.
- D. be stored in water until ready for use.

For which of the following reasons would a dentist administer epinephrine?

- A. Angina.
- B. Vasovagal syncope.
- C. Acute adrenal insufficiency.
- D. Anaphylaxis.

What is the earliest age that a congenitally missing mandibular second bicuspid can be confirmed?

- A. 2 years.
- B. 4 years.
- C. 6 years.
- D. 8 years.

A Bolton relationship has determined a

- maxillary “12” excess of 3.5mm
- maxillary “6” excess of 3.0mm

What effect(s) could this Bolton relationship have on an Angle Class I malocclusion?

- 1. Deeper overbite.
- 2. Maxillary crowding.
- 3. Increased overjet.
- 4. Maxillary spacing.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following is NOT a feature of bruxism?

- A. Radiographic evidence of the widening of the periodontal ligament.
- B. Increased mobility of teeth.
- C. Premature wear of occlusal surfaces.
- D. Erosion.

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Kilovoltage controls the

1. contrast.
  2. speed of the electrons.
  3. penetrating power of radiation.
  4. penumbra.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (1) and (4)
  - D. (4) only
  - E. All of the above.

What is the best imaging modality to assess the TMJ disc?

- A. Arthrography.
- B. Computed tomography.
- C. Magnetic resonance imaging.
- D. Corrected conventional tomography.

After setting, alginate impressions

- A. absorb water.
- B. remain dimensionally stable for 12 hours.
- C. have higher tear strength than polyvinylsiloxane impressions.
- D. can be poured twice with little effect on accuracy of the resulting cast.

Which of the following impression materials is NOT recommended for making a final impression for fabrication of dies for a porcelain fused to metal crown?

- A. Addition silicone.
- B. Condensation silicone.
- C. Irreversible hydrocolloid.
- D. Polyether.

To ensure a clinically acceptable setting time, polyalkenoic cements contain

- A. salicylic acid.
- B. phosphoric acid.
- C. maleic acid.
- D. tartaric acid.
- E. itaconic acid.

Primary herpetic gingivostomatitis most frequently occurs

- A. before age 10.
- B. between 11 and 20 years of age.
- C. between 21 and 30 years of age.
- D. after age 31.

Which syndrome presents with multiple cysts of the jaws?

- A. Gardner's.
- B. Gorlin-Goltz.
- C. Peutz-Jeghers.
- D. Sjögren's.

Increasing the kVp results in

- A. increased long scale image contrast.
- B. increased short scale image contrast.
- C. decreased long scale image contrast.
- D. decreased short scale image contrast.

All of the following appear as midline structures on periapical radiographs EXCEPT

- A. nasopalatine/incisive canal.
- B. anterior nasal spine.
- C. nasal septum.
- D. zygomatic process of the maxilla.

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At a six month recall visit, which of the following indicates that gingivitis has progressed to periodontitis?

- A. Attachment loss.
- B. Bleeding upon probing.
- C. Change in gingival colour.
- D. Increased tooth mobility.

A 10-15 second application of 37% phosphoric acid on prepared dentin will result in all of the following EXCEPT

- A. elimination of the smear layer.
- B. increased diameter of the dentinal tubules.
- C. demineralization of the superficial dentin.
- D. elimination of the collagen fibres.

When compared to zinc phosphate cement, glass ionomer cement has a/an

- A. lower solubility in oral fluids.
- B. ability to release fluoride.
- C. higher compressive strength.
- D. lower film thickness.

Which line angle is NOT present in a Class V amalgam cavity preparation?

- A. Mesioaxial.
- B. Axio-pulpal.
- C. Gingivoaxial.
- D. Distoaxial.
- E. Occlusoaxial.

Local anesthetics block nerve conduction by interfering with ionic movement of

- A. calcium.
- B. potassium.
- C. sodium.
- D. chloride.

Local anesthetics are less effective in inflamed tissue because they are

- A. diluted by the edematous fluid.
- B. rapidly redistributed by the increased blood flow.
- C. ionized by the acidic pH.
- D. rapidly degraded by released enzymes.

The smear layer created by root canal instrumentation can be removed by

- A. hydrogen peroxide and ethyl chloride.
- B. sodium hypochlorite and EDTA.
- C. chlorhexidine and chloroform.
- D. calcium hydroxide and phenol.

The occlusal parameter most likely associated with maxillary anterior spacing is a/an

- A. Class II, division 2 dental malocclusion.
- B. Class III skeletal malocclusion.
- C. accentuated maxillary curve of Wilson.
- D. reverse maxillary curve of Wilson.

Aspiration prior to a local anesthetic injection reduces the

- A. toxicity of local anesthetic.
- B. toxicity of vasoconstrictor.
- C. possibility of intravascular administration.
- D. possibility of paresthesia.

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Which of the following preoperative instructions are most appropriate for a well-controlled insulin-dependent diabetic patient who is scheduled at 9:00 a.m. for the extraction of two teeth under local anesthesia?

- A. Eat breakfast before the appointment and delay insulin injection until after the appointment.
- B. Take insulin before the appointment and delay breakfast until after the extractions.
- C. Eat breakfast before the appointment and take insulin according to the regime prescribed by the physician.
- D. Delay breakfast and insulin until after the dental appointment.

During the administration of local anesthesia, an intravascular injection will occur most often in a/an

- A. incisive block.
- B. posterior superior alveolar block.
- C. inferior alveolar block.
- D. anterior superior alveolar block.
- E. long buccal block.

A sign of gingivitis is

- A. bone loss.
- B. progressive attachment loss.
- C. the presence of minimal attached gingiva.
- D. bleeding on probing.

Which of the following is true about incision and drainage of an acute apical abscess (acute periradicular abscess)?

- A. A rubber dam drain is always placed and sutured to assist drainage.
- B. The procedure is only indicated with a localized, fluctuant swelling.
- C. Profound anesthesia of the surgical site is always possible.
- D. Immediate cessation of pressure and pain.

Which of the following drugs has the strongest antisialagogue properties?

- A. Codeine.
- B. Atropine.
- C. Acetylsalicylic acid.
- D. Ibuprofen.
- E. Penicillin.

The most effective way of minimizing a patient's radiation dose is

- A. a lead apron and thyroid collar.
- B. prescription radiography.
- C. fast emulsion film.
- D. intensifying screens.

In addition to oxygen, the drug of choice for the management of angina is

- A. epinephrine.
- B. acetylsalicylic acid.
- C. diphenhydramine.
- D. nitroglycerin.
- E. atropine.

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The local anesthetic technique requiring the needle to contact the neck of the condyle is the

- A. posterior superior alveolar nerve block.
- B. Gow-Gates block.
- C. Vazirani-Akinosi block.
- D. inferior alveolar nerve block.

Which drug is most adversely affected by ingestion of antacids?

- A. Cephalexin.
- B. Erythromycin.
- C. Tetracycline.
- D. Penicillin V.

The mesial furcation of maxillary first molars is best probed from the

- A. buccal.
- B. buccal or lingual.
- C. lingual.

A mandibular central incisor is to be extracted and added to a partial denture. The impression to add a tooth to the denture should be made

- A. before the extraction with the denture in the mouth, removing the denture from the impression then pouring the impression.
- B. after the extraction without the denture in the mouth.
- C. after the extraction with the denture in the mouth and pouring the impression leaving the denture in the impression.
- D. after the extraction with the denture in the mouth, removing the denture from the impression then pouring the impression.

What is the most likely cause of a maxillary denture dislodging when the patient opens wide or makes extreme lateral excursions?

- A. Insufficient posterior palatal seal.
- B. Poor denture base adaptation.
- C. Labial frenum impingement.
- D. Coronoid process interference.
- E. Pronounced midpalatal raphe.

The appropriate management for an avascular white lesion, 5 x 3mm in size, that has been present on the buccal mucosa for 6 months and has recently become ulcerated is

- A. observation.
- B. excisional biopsy.
- C. incisional biopsy.
- D. aspiration biopsy.
- E. cytologic examination.

Which of the following cause sedation?

- 1. Triazolam.
  - 2. Codeine.
  - 3. Meperidine.
  - 4. Ibuprofen.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following is NOT a property of lidocaine?

- A. Local anesthesia.
- B. Topical anesthesia.
- C. Muscle relaxation.
- D. Antiarrhythmic action.

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Which of the following antibiotics is the LEAST appropriate to be prescribed to a pregnant patient?

- A. Amoxicillin.
- B. Tetracycline.
- C. Erythromycin.
- D. Penicillin.

Which of the following is NOT an effect of acetaminophen?

- A. Analgesia.
- B. Anti-inflammatory effect.
- C. Inhibition of CNS cyclooxygenase.
- D. Antipyretic effect.

When comparing ibuprofen and celecoxib used in therapeutic doses, which of the following statements is true?

- A. Ibuprofen inhibits mostly COX-1, celecoxib inhibits mostly COX-2.
- B. Ibuprofen inhibits both COX-1 and COX-2, celecoxib inhibits mostly COX-2.
- C. Ibuprofen inhibits mostly COX-1, celecoxib inhibits both COX-1 and COX-2.
- D. Both ibuprofen and celecoxib are potent inhibitors of COX-1 and COX-2.

Which class of drugs does NOT have analgesic effects?

- A. Anticholinergics.
- B. Antidepressants.
- C. Anticonvulsants.
- D. Salicylates.

Compared to acetylsalicylic acid, long-term use of celecoxib is associated with

- A. reduced gastrointestinal ulcerations.
- B. increased cardiac protection.
- C. lower renal toxicity.
- D. increased safety for asthmatic patients.
- E. increased platelet aggregation inhibition.

Which of the following drugs can interfere with the effectiveness of oral contraceptives?

- A. Codeine.
- B. Penicillin V.
- C. Acetaminophen.
- D. Magnesium trisilicate.
- E. None of the above.

Treatment of primary herpetic gingivostomatitis should include

- A. topical steroids.
- B. application of dilute hydrogen peroxide.
- C. cauterization.
- D. control of secondary infection.

A dental laboratory has fabricated a removable partial denture framework. The framework fits the master cast well but when tried in the mouth a stable fit cannot be achieved. The most likely cause is

- A. improper major connector design.
- B. distortion in the final impression.
- C. shrinkage of the alloy during casting.
- D. improper casting temperature.

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Which of the following statements about incision and drainage of an acute apical abscess (acute periradicular abscess) is FALSE?

- A. The incision should be sutured after achieving drainage.
- B. The procedure is only indicated with a localized, fluctuant swelling.
- C. Profound anesthesia of the surgical site is not always possible.
- D. Relief of the pressure and pain is immediate after treatment.

Which type of bone grafting material is most likely to have a successful result?

- A. Allogenic.
- B. Alloplastic.
- C. Autogenous.
- D. Xenogenic.

A drug with anticholinergic side effects may cause

- A. convulsions.
- B. diarrhea.
- C. tremors.
- D. xerostomia.

For acute dental pain, the daily maximum cumulative dose of acetaminophen is

- A. 2400 mg.
- B. 3200 mg.
- C. 3600 mg.
- D. 4000 mg.

A zirconia-based ceramic fixed partial denture can be used for a patient with

- A. periodontally involved abutment teeth.
- B. long clinical crowns.
- C. deep vertical anterior overlap.
- D. cantilever pontic.
- E. evidence of bruxism.

Which sound is associated with the most common speech defect in complete denture patients?

- A. M.
- B. S.
- C. F.
- D. J.
- E. V.

Increasing the amount of network modifiers (e.g. CaO, Na<sub>2</sub>O) in porcelain will

- A. increase its fusion temperature.
- B. decrease its thermal expansion.
- C. increase its chemical reactivity.
- D. decrease its potential for devitrification upon heating.

Voids in a gypsum cast are most likely the result of

- A. low surface tension of a silicone impression material.
- B. high surface tension of an irreversible hydrocolloid.
- C. using a hydrophilized addition silicone.
- D. spraying a surfactant on the impression.

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Overeruption of the posterior teeth results in increased

1. crowding.
  2. overbite.
  3. overjet.
  4. rotation.
- 
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A healthy, 55 year old patient has alveolar bone loss on 40% of teeth, 3-4mm of clinical attachment loss and probing pocket depths ranging between 5-6mm with bleeding upon probing. The most likely diagnosis is

- A. mild generalized chronic periodontitis.
- B. mild localized chronic periodontitis.
- C. moderate generalized chronic periodontitis.
- D. moderate localized chronic periodontitis.

The most appropriate type of bone grafting material for use in the maxillofacial region is

- A. allogenic.
- B. alloplastic.
- C. autogenous.
- D. xenogenic.

A patient presents with a chronic, purulent draining fistula in the right submandibular area. Culture results are inconclusive but actinomycosis is suspected. Which of the following intravenous antibiotics is most appropriate for the management of the condition?

- A. Sulfonamide.
- B. Aminoglycoside.
- C. Cephalosporin.
- D. Erythromycin.
- E. Penicillin.

The most common medical emergency in the dental office is a/an

- A. allergic reaction.
- B. cerebrovascular accident.
- C. myocardial infarction.
- D. seizure.
- E. syncopal episode.

A patient had a coronary arterial stent placed 1 year ago following a myocardial infarction and has been asymptomatic since. The most appropriate management is to

- A. avoid using epinephrine impregnated retraction cord.
- B. use local anesthetics without epinephrine.
- C. perform only emergency dental treatment for 1 year.
- D. not recline the patient more than 45 degrees.
- E. prescribe antibiotics to prevent infective endocarditis.

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Antibiotic prophylaxis prior to tooth extraction is required for (a)

- A. diabetes mellitus.
- B. mitral valve prolapse with regurgitation.
- C. prosthetic heart valve.
- D. organic heart murmur.
- E. functional heart murmur.

The most effective method for protecting dental personnel who expose radiographs is to have them

- A. stand behind a barrier during exposure.
- B. stand 2 metres away from the x-ray generator during the exposure.
- C. wear a lead apron during exposure.
- D. wear a radiation monitoring device (film badge) during exposure.

Which substance found in radiograph processing solutions is of most concern environmentally?

- A. Ammonium thiosulfite.
- B. Acetic acid.
- C. Silver.
- D. Sodium sulfite.

A patient with a history of infective endocarditis is currently taking penicillin for an unrelated condition. The most appropriate management for periodontal therapy for this patient is to

- A. prescribe a different antibiotic.
- B. increase the dosage of penicillin.
- C. maintain penicillin at the present level.
- D. use chlorhexidine solution as a rinse prior to therapy.

A post is used in an endodontically treated tooth to

- A. obturate the canal.
- B. reinforce the root.
- C. reinforce the remaining coronal tooth structure.
- D. retain the core build up.

In a 17 year old, which traumatic dental injury is most likely to result in pulp necrosis on tooth 1.1?

- A. Extrusion.
- B. Intrusion.
- C. Luxation.
- D. Subluxation.

Which of the following drugs will NOT cause gingival hyperplasia?

- A. Cyclosporine.
- B. Doxepin.
- C. Phenytoin.
- D. Verapamil.

When compared to quaternary ammonium oral rinses, 0.12% chlorhexidine oral rinses have a higher antimicrobial activity due to increased

- A. toxicity.
- B. potency.
- C. concentration.
- D. substantivity.

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Assuming the daily maximum is not exceeded, which of the following is/are appropriate for pain management for an adult with a history of severe asthma and nasal polyps following an emergency pulpectomy?

- A. Naproxen 250 mg, every 6 to 8 hours.
- B. Acetylsalicylic acid 650 mg every 4 hours.
- C. Ketorolac 10 mg every 4 hours.
- D. Acetaminophen 1000 mg every 6 hours.

Asthmatic patients using corticosteroid inhalers may develop candidiasis on the dorsal surface of the tongue because of

- A. a systemic antibacterial action.
- B. local destruction of normal oral flora.
- C. prolonged local vasoconstriction.
- D. cross-reacting antigens in the tongue.
- E. local immunosuppression.

Which of the following symptoms are consistent with an anaphylactic reaction to penicillin?

- A. Deafness, dizziness, acute anemia and bronchial constriction.
- B. Crystalluria, nausea, vomiting, diarrhea, and bronchial constriction.
- C. Oliguria, hematuria, bronchial constriction, and cardiovascular collapse.
- D. Urticaria, diarrhea, bronchial constriction and cardiovascular collapse.

A pale 8 year old patient has generalized gingival enlargement and spontaneous bleeding. The most appropriate initial management of this patient is to

- A. perform an incisional biopsy.
- B. obtain a cytologic smear.
- C. order a complete blood count.
- D. obtain bacterial cultures.
- E. obtain a fasting blood glucose level.

Hydantoin treatment causes gingival hyperplasia as a result of a/an

- A. increased number of epithelial cells.
- B. thickening of the basement membrane.
- C. increased production of proteoglycans.

Which of the following medications increases a patient's risk for intraoral candidiasis?

- A. Warfarin.
- B. Cyclosporine.
- C. Pentobarbital.
- D. Ibuprofen.
- E. Pilocarpine.

The prognosis of guided tissue regeneration (GTR) is best for the treatment of

- A. horizontal bone loss.
- B. one-wall osseous defects.
- C. two-wall osseous defects.
- D. three-wall osseous defects.

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In a developing crown, ameloblasts and odontoblasts

- A. are polarized in opposite directions.
- B. initially produce an organic nonmineralized matrix.
- C. begin to produce matrix simultaneously.
- D. have rapid cell division.

Which of the following teeth is LEAST likely to develop a furcation involvement?

- A. 1.4.
- B. 1.5.
- C. 1.6.
- D. 1.7.

In endodontic therapy, the most effective irrigating solution for dissolving organic debris is

- A. ethylenediaminetetraacetic acid (EDTA).
- B. sodium hypochlorite.
- C. calcium hydroxide.
- D. hydrogen peroxide.

The antibiotic of choice for infections of pulpal origin is

- A. penicillin V.
- B. metronidazole.
- C. erythromycin.
- D. tetracycline.

An anaphylactic reaction to penicillin is most likely to occur

- 1. when the drug is administered parenterally.
- 2. in patients who have already experienced an allergic reaction to the drug.
- 3. within minutes after drug administration.
- 4. when the drug is administered orally.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which element found in radiograph processing solutions is of most concern environmentally?

- A. Mercury.
- B. Lead.
- C. Silver.
- D. Copper.

Which of the following is consistent with reversible pulpitis?

- A. Discontinuous lamina dura and a periapical radiolucency.
- B. Draining sinus tract that traces to the apex of the tooth.
- C. Pain to cold that ceases after removal of the stimulus.
- D. Painful response to percussion and palpation.

The usual adult dosage of codeine administered orally is

- A. 500-1000mg.
- B. 250-500mg.
- C. 30-60mg.
- D. 2-5mg.
- E. None of the above.

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When given prophylactically to prevent infective endocarditis, oral amoxicillin should be taken

- A. immediately prior to the dental procedure.
- B. one hour prior to the dental procedure.
- C. four hours prior to the dental procedure.
- D. one day prior to the dental procedure.
- E. two days prior to the dental procedure.

Which of the following penicillins is most effective against Gram-negative organisms?

- A. Nafcillin.
- B. Ampicillin.
- C. Methicillin.
- D. Penicillin V.
- E. Phenethicillin.

A positive Nikolsky's sign is a diagnostic feature of

- A. lichen planus.
- B. erythema multiforme.
- C. pemphigus vulgaris.
- D. chronic marginal gingivitis.
- E. lupus erythematosus.

Healthy attached gingiva

- A. has no basal cell layer.
- B. is closely bound to underlying muscle.
- C. contains elastic fibres.
- D. is keratinized.

The tissue which is most sensitive to radiation is

- A. nerve.
- B. dental pulp.
- C. lymphoid.
- D. muscle.

The management of syncope following local anesthetic administration does NOT include

- A. elevating the legs.
- B. placing in a supine position.
- C. administering oxygen.
- D. ensuring the airway is open.
- E. administering epinephrine.

The best method to control the setting time of an irreversible hydrocolloid without affecting its physical properties is to alter the

- A. water temperature.
- B. water:powder ratio.
- C. mixing time.
- D. composition.

A 43 year old patient with a history of severe asthma and nasal polyps has an emergency pulpotomy. Assuming daily recommended doses are followed, which of the following is the most appropriate drug management?

- A. Acetaminophen 650 mg every 4 hours.
- B. Naproxen 250 mg every 6-8 hours.
- C. Ketorolac 10 mg every 4 hours.
- D. Acetylsalicylic acid 650 mg every 4 hours.

A 70 year old insulin-dependent patient has just completed a 7-day course of ampicillin for a respiratory infection. He has signs and symptoms consistent with oral candidiasis. Which of the following drugs is the most appropriate treatment?

- A. Nystatin.
- B. Acyclovir.
- C. Clindamycin.
- D. Ampicillin.
- E. Metronidazole.

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Which of the following should NOT be prescribed for a patient receiving warfarin?

- A. Acetaminophen.
- B. Oxycodone.
- C. Ketorolac.
- D. Codeine.

Which of the following should NOT be prescribed for a patient receiving warfarin?

- A. Acetylsalicylic acid.
- B. Oxycodone.
- C. Acetaminophen.
- D. Codeine.

Which of the following is appropriate to provide postoperative pain control for an 80kg, 20 year old patient with an allergy to codeine following the removal of 4 erupted third molars?

- A. Hydromorphone 2 mg, every 4-6 hours prn.
- B. Ibuprofen 800 mg, 1 hour preoperatively, followed by 400 mg, every 4-6 hours prn.
- C. Acetaminophen 650 mg, with oxycodone 10 mg, every 4-6 hours prn.

What is the primary source of elevated collagenolytic activity in chronic periodontitis?

- A. P. gingivalis.
- B. Macrophages.
- C. Neutrophils.
- D. P. intermedia.

In severe gingival recession, if the marginal tissue extends to the mucogingival junction, and there is loss of interdental tissue, the likelihood of complete root coverage after gingival grafting is

- A. greater than 75%.
- B. between 25 and 50%.
- C. less than 20%.

A gingival pocket (pseudopocket) is characterized by

- A. loss of attachment.
- B. loss of alveolar bone.
- C. deepened probing depth.

The removal of a partially impacted mandibular third molar is appropriate for the prevention of

- A. anterior crowding.
- B. root caries of the adjacent tooth.
- C. jaw fracture from contact sports.

Which of the following is the most predictable indicator of periodontal stability?

- A. Patient compliance with maintenance visit.
- B. Gingival inflammation.
- C. Plaque index.
- D. Absence of bleeding on probing.

Periodontitis

- A. affects individuals with various susceptibility at different rates.
- B. affects different parts of dentition in the same individual similarly.
- C. is generally not progressive in nature.

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In addition to plaque index and probing depths, which of the following must be re-examined following the completion of initial periodontal therapy?

- A. Bleeding on probing.
- B. Bone level.
- C. Root sensitivity.

Calculus attaches to tooth surfaces by all of the following EXCEPT

- A. organic pellicle.
- B. mechanical locking to tooth/root irregularities.
- C. close adaption to cementum.
- D. hemidesmosomes.

In a patient with renal failure, which of the following does/do need a dose interval adjustment?

- 1. Penicillin V.
  - 2. Metronidazole.
  - 3. Erythromycin.
  - 4. Clindamycin.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following is the most potent corticosteroid?

- A. Cortisone.
- B. Dexamethasone.
- C. Hydrocortisone.
- D. Prednisone.
- E. Triamcinolone.

The Controlled Drugs and Substances Act controls the distribution and use of which of the following?

- A. Amitriptyline.
- B. Amoxicillin.
- C. Ibuprofen.
- D. Oxycodone.

The Controlled Drugs and Substances Act controls the distribution and use of which of the following?

- A. Acetaminophen.
- B. Diazepam.
- C. Ibuprofen.
- D. Penicillin V.

Which of the following is associated with drug-induced bruxism?

- A. Amitriptyline.
- B. Clonazepam.
- C. Fluoxetine.
- D. Phenelzine.

Which of the following is most likely to have its effect reduced in a patient with genetic polymorphism of CYP2D6?

- A. Acetaminophen.
- B. Amoxicillin.
- C. Clindamycin.
- D. Codeine.
- E. Ibuprofen.

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Administration of which of the following is most likely to predispose a patient to seizures?

- A. Acetaminophen.
- B. Codeine.
- C. Ibuprofen.
- D. Ketorolac.
- E. Meperidine.

Which of the following medications is most appropriate in the management of a patient experiencing an acute asthmatic attack?

- A. Salbutamol.
- B. Sodium cromoglycate.
- C. Fluticasone.
- D. Zileuton.

Patients who have been prescribed an acetaminophen/codeine combination must be advised

- A. to complete the prescribed medication.
- B. that it can cause diarrhea.
- C. that it can cause hypertension.
- D. to avoid consuming alcohol.

Which of the following statements is true?

- A. A major percentage of radiographically detected proximal radiolucencies in enamel are cavitated.
- B. Caries progression through enamel can take as long as 6 to 8 years.
- C. Caries progression can only be arrested in enamel.
- D. Arrested carious lesions in enamel are softer than intact enamel.

In complete denture construction, the physiologic rest position

- A. provides a guide to establish the vertical dimension of occlusion.
- B. determines the level of the occlusal plane.
- C. provides a guide for the selection of cusp inclination.
- D. determines the shape of the compensating curve.
- E. is useful to the determination of condylar inclination.

Which drug is indicated for the management of an acute asthmatic attack

- A. Fluticasone.
- B. Salbutamol.
- C. Triamcinolone.
- D. Budesonide.

Osteoporosis is linked to

- A. low estrogen levels.
- B. high testosterone levels.
- C. low androgen levels.
- D. high progesterones levels.

Which of the following will increase the flexibility of a removable partial denture clasp arm?

- A. Increasing the length.
- B. Increasing the diameter.
- C. Decreasing the taper.
- D. Decreasing the retentive undercut.

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One millilitre of a 2% solution of lidocaine hydrochloride contains how many milligrams of the drug?

- A. 2
- B. 20
- C. 200
- D. 2000

The primary use of nitrous oxide and oxygen is as a(n)

- A. substitute agent for local anesthesia.
- B. general anesthetic agent.
- C. agent for conscious sedation.

During the extraction of an impacted tooth 3.8 the lingual nerve is damaged. All of the following can occur EXCEPT a

- A. loss of taste from the anterior 2/3 on the left side of the tongue.
- B. deviation of the tongue to the left on protrusion.
- C. decreased salivary output from the left sublingual gland.
- D. decreased salivary output from the left submandibular gland.
- E. numbness of the floor of the mouth on the left side.

Chlorhexidine is an effective antiplaque agent due to its ability to

- A. bind to the positively charged pellicle.
- B. damage the microbial cell membrane.
- C. neutralize the bacterial end-products such as lactic acid.
- D. non-selectively reduce the oral microbial flora.

Which of the following drugs does NOT cause gingival enlargement?

- A. Nifedipine.
- B. Cyclosporine.
- C. Phenytoin.
- D. Prednisolone.

Which of the following are signs of aggressive periodontitis?

- 1. Rapid attachment loss.
  - 2. Specific periodontal microbial pathogens.
  - 3. Onset before the age of 35.
  - 4. Ulcerations of the gingiva.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A 10 year old has diffuse bilateral white areas on the buccal mucosa, dorsum of the tongue and the floor of the mouth. The mother tells the dentist that she has noticed this appearance for at least 3 years, but she was not concerned since she has had a similar condition all of her life. The most likely diagnosis is

- A. leukoplakia.
- B. white sponge nevus.
- C. frictional keratosis.
- D. allergic reaction to cinnamon.

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A patient on broad spectrum antibiotics for 4 weeks has widespread, sore, red and white oral mucosal lesions. The most likely diagnosis is

- A. candidiasis.
- B. leukoplakia.
- C. erythema multiforme.
- D. erosive lichen planus.
- E. pemphigoid.

Which of the following pontic designs will make it most difficult to maintain optimal oral hygiene?

- A. Modified ridge lap.
- B. Hygienic.
- C. Saddle.
- D. Conical.
- E. Ovoid.

The selective grinding rule for removing premature contacts on the working side of complete dentures is to grind

- A. only the fossae of teeth.
- B. the buccal cusps of maxillary and lingual cusps of mandibular teeth.
- C. only the mandibular teeth.
- D. lingual and buccal cusps of maxillary teeth.
- E. the maxillary and mandibular cuspids.

Which of the following dental materials shows a chemical bond to clean dentin?

- A. Calcium hydroxide.
- B. Zinc-phosphate.
- C. Zinc-oxide and eugenol.
- D. Glass ionomer.

Which of the following antibiotics may be cross-allergenic with penicillin?

- A. Neomycin.
- B. Cephalexin.
- C. Clindamycin.
- D. Erythromycin.
- E. Tetracycline.

A differential diagnosis for gingival hyperplasia should include which of the following conditions?

- A. Multiple myeloma.
- B. Monocytic leukemia.
- C. Erythema multiforme.
- D. Pemphigus vulgaris.

A patient is not able to close her left eye, wrinkle her forehead or smile on the left side. The most likely diagnosis is

- A. contralateral subarachnoid hemorrhage.
- B. fracture of the base of the skull.
- C. Horner's syndrome.
- D. acute mastoiditis.
- E. facial nerve paralysis.

The use of conscious sedation for a restorative procedure in an office environment

- A. requires the services of an anesthesiologist.
- B. is contraindicated in children.
- C. precludes the use of local anesthesia.
- D. requires effective local anesthesia.
- E. may be used in conjunction with narcotics.

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Isolated gingival recession is most frequently seen on teeth that are

- A. heavily restored.
- B. labially prominent.
- C. mobile.
- D. nonvital.

Periodontal pockets CANNOT be reduced by

- A. occlusal adjustment.
- B. scaling and root planing.
- C. open flap curettage.
- D. guided tissue regeneration.

A modified hinge non-adjustable articulator is limited in its accuracy to reproduce dynamic jaw movements because it can only reproduce

- A. large centric relation-maximum intercuspation slides.
- B. one hinge axis movement.
- C. eccentric movements by multiple lateroprotrusive registrations.

Which maxillary central incisor characteristic is the most limiting in the construction of a Class II functional appliance?

- A. Retroclination.
- B. Proclination.
- C. Overeruption.
- D. Undereruption.

When performing a periodontal screening and recording (PSR) for a patient, the code asterisk (\*) is used for a sextant when

- A. a tooth in the sextant needs to be extracted.
- B. all the teeth in the sextant are missing.
- C. a mucogingival problem is present.
- D. a tooth in the sextant has supraerupted.

Orthodontic growth modification should be

- A. started as early as possible.
- B. individualized to maximize effect.
- C. delayed until the eruption of the permanent dentition.
- D. used in adult treatment.

When an orthodontic force is applied to a maxillary right canine, blood flow to the periodontal ligament is altered within

- A. seconds.
- B. minutes.
- C. hours.
- D. days.

The correlation between malocclusion and temporomandibular dysfunction is

- A. weak.
- B. moderate.
- C. strong.
- D. definitive.

The etiology of an open bite malocclusion of dental origin is most often the result of

- 1. increased eruption of the anterior teeth.
- 2. decreased eruption of the anterior teeth.
- 3. decreased eruption of the posterior teeth.
- 4. increased eruption of the posterior teeth.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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The etiology of a deep bite malocclusion of dental origin is most often the result of

1. increased eruption of the anterior teeth.
  2. decreased eruption of the anterior teeth.
  3. decreased eruption of the posterior teeth.
  4. increased eruption of the posterior teeth.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Generalized aggressive periodontitis is characterized by attachment loss affecting the first molars and incisors and at least

- A. 1 other permanent tooth.  
B. 3 other permanent teeth.  
C. 5 other permanent teeth.  
D. 7 other permanent teeth.

A daily dose of 81 mg of acetylsalicylic acid is used for its

- A. analgesic properties.  
B. antipyretic effect.  
C. antiplatelet action.  
D. anti-inflammatory function.

Which of the following analgesics can exacerbate peptic ulcers?

- A. Acetaminophen.  
B. Ibuprofen.  
C. Codeine.  
D. Tramadol.

Which of the following is/are locally delivered antimicrobial(s) agent(s) used to treat infected periodontal pockets?

1. Metronidazole.
  2. Chlorhexidine.
  3. Doxycycline.
  4. Clindamycin.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only.  
E. All of the above.

Which of the following will increase resistance to dislodging forces on a removable partial denture?

- A. Locating direct and indirect retainers as close as possible to the distal extension base(s).  
B. Locating direct and indirect retainers as far as possible from the distal extension base(s).  
C. Locating direct retainers as close as possible to the distal extension base(s) and the indirect retainers as far as possible from the distal extension base(s).  
D. Locating direct retainers as far as possible from the distal extension base(s) and the indirect retainers as close as possible to the distal extension base(s).

When probing a healthy peridontium using light forces, the probe tip will most likely extend to the

- A. attached gingiva.  
B. junctional epithelium.  
C. transverse fibres of the periodontal ligament.

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Which of the following is NOT a sign of pulpal necrosis in immature teeth?

- A. Loss of thermal sensitivity.
- B. Coronal discolouration.
- C. Periradicular radiolucency.
- D. Abnormal mobility.

Drug-induced gingival overgrowth will most likely occur on the interdental papillae of which area?

- A. Anterior palate.
- B. Posterior palate.
- C. Anterior labial.
- D. Posterior buccal.

The mucogingival junction with no interproximal attachment loss is a Miller Class. What is the Miller's class for gingival recession that extends beyond the mucogingival junction with no interproximal attachment loss?

- A. I.
- B. II.
- C. III.
- D. IV.

A fixed partial denture with a single pontic is deflected a certain amount, a span of two similar pontics will deflect

- A. the same amount.
- B. twice as much.
- C. four times as much.
- D. eight times as much.

The need to frequently replace intact orthodontic elastics is a direct consequence of

- A. creep.
- B. low modulus.
- C. stress relaxation.
- D. high ductility.

Which of the following is most likely to affect the difficulty of extraction of an impacted mandibular third molar?

- A. Root width.
- B. Shape of the crown.
- C. Size of the pulp chamber.
- D. Angulation of the impaction.

Following extraction of teeth, root fragments can be left in place when

- A. there is no plan to place a dental implant in the site.
- B. the root is small, not infected and located deep in the bone.
- C. the maxillary sinus is pneumatized and close to the tooth roots.
- D. the root fragment is mobile and no more than 7-8mm in length.

A 6 year old has circumscribed suppurative lesions that look like cigarette burns on the left ear lobe and the right knuckles. The parents are cooperative and respond to the dentist in a coherent manner. The most likely diagnosis is

- A. battered child syndrome.
- B. impetigo.
- C. osteogenesis imperfecta.
- D. Münchhausen syndrome.
- E. von Willebrand disease.

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An infant has asymptomatic small whitish outgrowths at the junction of the soft palate and hard palate. What is the most likely diagnosis?

- A. Dental lamina cysts.
- B. Epstein pearls.
- C. Bohn nodules.
- D. Fordyce granules.

A healthy 40 year old female patient complains of periodic acute, excruciating pain in the right infraorbital region. The pain is of short duration and can be elicited by lightly touching the skin of the area. Which of the following drugs is the most appropriate management?

- A. Carbamazepine.
- B. Acetazolamide.
- C. Succinylcholine.
- D. Penicillin.

In comparison to visible light, X-rays

- A. have a longer wave length.
- B. have higher energy.
- C. travel faster.
- D. can be focused.

Which of the following is a CONTRAINDICATION to the use of Tylenol 3®?

- A. Concurrent use of penicillin V.
- B. Asthmatic reaction to acetylsalicylic acid.
- C. An allergy to acetaminophen.
- D. A gastric ulcer.

A common filler added to resin to produce dental composites is

- A. calcium salt.
- B. quartz.
- C. zinc oxide.

Flux is added to the casting metal during melting to

- A. minimize oxidation.
- B. enhance melting.
- C. increase stiffness.
- D. decrease fluidity.

Which of the following orthodontic alloy wires has the greatest effectiveness of activation?

- A. Nickel-titanium.
- B. Stainless-steel.
- C.  $\beta$ -titanium.
- D. Cobalt chromium.

Which of the following structures may be mistaken as a pathologic finding on periapical radiographs of the premolar segments of the maxilla?

- A. Bony septa in the maxillary sinus.
- B. Nasopalatine foramen.
- C. Nasolacrimal canal.
- D. Mental foramen.

Which of the following may be mistaken as a pathologic finding on periapical radiographs of the premolar segments of the maxillary dental arch?

- A. Pneumatisation of the alveolar process.
- B. Nasopalatine foramen.
- C. Nasolacrimal canal.
- D. Mental foramen.

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A patient with a history of hypertension presents for an emergency dental extraction. His blood pressure is 158/100 mmHg. The dentist intends to use lidocaine 2% with 1:100,000 epinephrine for local anesthesia. The most appropriate management is to

- A. direct the patient to a hospital emergency room.
- B. extract the tooth using a maximum of four cartridges.
- C. extract the tooth using a maximum of two cartridges.
- D. extract the tooth and advise the patient to take additional antihypertensive medication.

Five years ago, a 35 year old patient received chemotherapy followed by adjuvant intensity-modulated radiotherapy of 3000 cGy to the mandible for treatment of Hodgkin's disease. The extraction of tooth number 3.7 with local anesthesia is planned. The most appropriate management is

- A. hyperbaric oxygen treatment prior to tooth extraction.
- B. to prescribe antibiotics following tooth extraction.
- C. hyperbaric oxygen treatment prior to and following tooth extraction.

Which of the following conditions produces a radiolucent image?

- A. Sialolithiasis.
- B. Osteosclerosis.
- C. Odontoma.
- D. Ameloblastic fibroma.

The most frequent radiographic appearance of metastatic carcinoma in the jaws is a radiolucency

- A. ill-defined in the anterior maxilla.
- B. ill-defined in the posterior mandible.
- C. well-defined in the anterior maxilla.
- D. well-defined in the posterior mandible.

Following an inferior alveolar block injection of 2% lidocaine with 1:100,000 epinephrine, a patient experiences a transient tachycardia. Which is the most likely cause of this reaction?

- A. Vasovagal syncope.
- B. An allergic reaction.
- C. Myocardial infarction.
- D. Intravascular injection.
- E. An anaphylactoid reaction.

If removal of teeth is indicated in a patient who is to receive radiation therapy for a carcinoma of the tongue, the teeth should be extracted

- A. prior to the radiation therapy.
- B. during the radiation therapy.
- C. immediately post-radiation therapy.
- D. six months post-radiation therapy.

An anterior crossbite of a permanent maxillary incisor in a mixed dentition is most often associated with

- A. a functional shift.
- B. unexplainable genetic factors.
- C. lingually situated supernumerary teeth.
- D. prolonged retention of a primary incisor.
- E. premature eruption of a maxillary incisor.

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Which of the following unilateral fixed partial dentures is most likely to have insufficient periodontal support? A fixed partial denture extending from the

- A. maxillary first premolar to the first molar.
- B. maxillary canine to the first molar.
- C. mandibular central incisor to the first premolar.
- D. mandibular second premolar to the second molar.

The antithrombotic effects of acetylsalicylic acid may be compromised by

- A. codeine.
- B. acetaminophen.
- C. ibuprofen.
- D. tramadol.

The most reliable diagnostic sign of gingival inflammation is

- A. retractability.
- B. edema.
- C. bleeding.
- D. cratering.
- E. altered texture.

In Turner's syndrome, the patient is most likely to exhibit

- A. delayed tooth eruption.
- B. micrognathia.
- C. a wide maxilla.
- D. oligodontia.

When an oxygen tank is half full, what is the pressure gauge reading?

- A. 500 psig.
- B. 1000 psig.
- C. 1500 psig.
- D. 2000 psig.

A 50 year old edentulous patient is complaining that spicy foods are no longer enjoyable since he received his new complete upper and lower dentures. The most likely reason for this occurrence is that the

- A. dentures cover his taste buds.
- B. free nerve endings are now covered by the dentures.
- C. dentures are obstructing air flow to the olfactory epithelium.

*Prevotella intermedia* increases significantly in pregnancy gingivitis because of increased

- A. gingival blood vessels with increased inflammation.
- B. colonization of shallow pockets.
- C. levels of plaque fluid in deep periodontal pockets.
- D. steroid hormones act as growth factors.

Which of the following characteristics is NOT seen in all patients with aggressive periodontitis?

- A. Rapid attachment loss and bone destruction.
- B. Amount of microbial deposits inconsistent with disease severity.
- C. Diseased sites infected with *Aggregatibacter* (*Actinobacillus*) *actinomycetemcomitans*.
- D. Familial aggregation of diseased individuals.

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Which of the following has a direct effect on periodontal tissues in diabetes mellitus-associated gingivitis?

- A. Lipopolysaccharides.
- B. Matrix metalloproteinases.
- C. Proinflammatory cytokines.
- D. Prostaglandins.
- E. Leukotoxin.

When percussion on the occlusal surface of a tooth results in a positive response, the most likely etiology of inflammation is

- A. pulpal.
- B. periodontal.
- C. periapical.

The permanent teeth most commonly transposed are the

- A. mandibular incisor and mandibular canine.
- B. mandibular canine and mandibular first premolar.
- C. maxillary upper lateral incisor and maxillary canine.
- D. maxillary canine and maxillary first premolar.

The permanent teeth most frequently ankylosed are the

- A. canines.
- B. incisors.
- C. molars.
- D. premolars.

Which of the following tests is/are useful in the diagnosis of periradicular periodontitis

- 1. thermal test.
- 2. electric pulp test.
- 3. periapical radiograph.
- 4. probing.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

Residual root tips will not be visible on panoramic radiographs of a completely edentulous patient if

- A. they are not close enough to the focal trough of the machine.
- B. the patient is wearing dentures when the image is produced.
- C. a digital panoramic machine is used.
- D. the patient moves during production of the image.

A 50 year old female had intravenously administered bisphosphonates for the past 3 years. She now has an area of exposed necrotic bone with sharp edges in an edentulous maxilla. The most appropriate management is to perform

- A. minimal surgical debridement immediately.
- B. aggressive surgical debridement immediately.
- C. minimal surgical debridement after delaying 3 months.
- D. aggressive surgical debridement after delaying 3 months.

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A 55 year old patient had a squamous cell carcinoma of the oral cavity 5 years previously. His medical management involved surgery, chemotherapy and intensity-modulated radiotherapy (IMRT) of 65 Gy which included the mandible. The most appropriate management for the extraction of tooth 3.7 under local anesthesia is

- A. transfusion with packed red blood cells.
- B. hyperbaric oxygen treatment prior to tooth extraction.
- C. hyperbaric oxygen treatment prior to and following tooth extraction.
- D. using local anesthetic without epinephrine.

What is the most appropriate film size for making an occlusal radiograph in a 3 year old patient?

- A. 0.
- B. 1.
- C. 2.
- D. 4.

The most appropriate vertical angulation to make a bite-wing radiograph in the primary dentition is

- A.  $-10^{\circ}$ .
- B.  $-5^{\circ}$ .
- C.  $0^{\circ}$ .
- D.  $+5^{\circ}$ .
- E.  $+10^{\circ}$ .

The percentage of documented child abuse cases estimated to involve orofacial injuries is

- A. 10-20.
- B. 30-40.
- C. 50-60.

What percentage of natal teeth are supernumerary?

- A. 10.
- B. 50.
- C. 90.

The most appropriate recall interval for an 8 year old patient with high caries risk is

- A. 3 months.
- B. 6 months.
- C. 9 months.
- D. 12 months.

Which of the following statements is true regarding the radiographic appearance of furcation involvements?

- A. A definitive diagnosis can be made from a radiograph.
- B. Bone loss is greater than it appears on a radiograph.
- C. They are best evaluated with periapical radiographs.
- D. Furcation involvements cannot be seen on radiographs.

Which of the following impression materials will still result in an accurate cast when poured two weeks after making the impression?

- A. Polyether.
- B. Polysulfide.
- C. Addition silicone.
- D. Condensation silicone.

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Which of the following drugs inhibits salivary flow?

- A. Alendronate.
- B. Pilocarpine.
- C. Glycopyrrolate.
- D. Nystatin.

Which of the following drugs inhibits salivary flow?

- A. Penicillin V.
- B. Loratadine.
- C. Probantheline.
- D. Nystatin.

Which of the following statements regarding geriatric patients is correct?

- A. Drugs that primarily depend on pulmonary excretion for elimination should be prescribed in smaller doses or at greater time intervals.
- B. Multiple drug ingestion is less likely to result in toxicity due to inhibition of biotransformation.
- C. Multiple drug use predisposes the elderly to multiple side effects that may impact on their oral health.

Which of the following drugs is CONTRAINDICATED in patients with Long QT syndrome?

- A. Azithromycin.
- B. Clotrimazole.
- C. Diazepam.
- D. Acyclovir.

The CNS depressant effects of midazolam are reversed by the administration of

- A. diphenhydramine.
- B. flumazenil.
- C. naloxone.
- D. ranitidine.

Which of the following drugs can be administered to manage pain following the acute onset of a migraine?

- A. Amitriptyline.
- B. Nifedipine.
- C. Propranolol.
- D. Sumatriptan.

Mucosal thickening in the maxillary sinus

- 1. may fill the entire air space of the sinus.
  - 2. is often usually an incidental radiographic finding.
  - 3. may be caused by a periapical infection.
  - 4. may be associated with nasal discharge.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following conditions is NOT a sequela of a tooth completely impacted in bone?

- A. Development of a dentigerous/follicular cyst around its crown.
- B. External resorption of the tooth.
- C. Osteonecrosis of the adjacent bone.
- D. Development of a benign neoplasm adjacent to its crown.

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Which of the following lesions may appear radiolucent on a radiograph?

- A. Dense bone island/idiopathic osteosclerosis.
- B. Periapical osseous dysplasia.
- C. Sialolith.
- D. Osteopetrosis.

The vibrating line of the palate

- A. delineates the movement of the soft palate.
- B. is always on the hard palate.
- C. is a well-defined line across the palate.
- D. is not a useful landmark in complete denture fabrication.

Epinephrine antagonizes the effects of histamine by

- A. preventing the release of histamine.
- B. acting on the central nervous system.
- C. producing physiologic actions opposite to that of histamine.
- D. competitive blocking of histamine at the cellular receptor site.

In orthodontic treatment, extraction of premolars will help to

- A. open the vertical dimension.
- B. labialize the incisors.
- C. correct a midline deviation.
- D. improve stability.

The most appropriate time to initiate surgical treatment of a prognathic mandible immediately follows the

- A. primary dentition.
- B. early mixed dentition.
- C. late mixed dentition.
- D. cessation of growth.

The most appropriate management for atypical swallowing is

- A. tongue trap appliance.
- B. occipital traction.
- C. myofunctional treatment.
- D. Hawley appliance.

Premature loss of primary molars may result in

- A. decrease in the curve of Spee.
- B. decrease in the overbite and overjet.
- C. increase in frequency of eruption irregularities.
- D. increase in vertical dimension.

A 10 year old patient is missing a permanent maxillary left lateral incisor. There are no other orthodontic problems. A dental implant is planned when the patient is an adult. The most appropriate management is to

- A. extract the primary maxillary left canine as soon as possible.
- B. encourage the permanent left canine to erupt into an Angle's Class I relationship.
- C. let the permanent canine erupt into a mesial position and reposition it into an Angle's Class I as soon as possible.
- D. let the permanent canine erupt into a mesial position and reposition it into an Angle's Class I before placing the implant.
- E. let the permanent canine erupt into a mesial position and place the implant distal to the canine.

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In a Tanaka and Johnson mixed dentition analysis, the mesiodistal width of permanent maxillary canines and premolars is determined by the width of the

- A. permanent maxillary incisors.
- B. permanent mandibular incisors.
- C. primary canines and maxillary molars.
- D. primary canines and mandibular molars.

The mandibular intercanine width increases until full eruption of the permanent

- A. incisors.
- B. canines.
- C. second molars.
- D. third molars.

Root resorption of primary teeth can be delayed by

- A. the absence of a permanent replacement.
- B. the premature loss of adjacent primary teeth.
- C. the presence of premature occlusal contact.
- D. inflammation of the pulp.
- E. occlusal crossbite.

Root resorption of primary teeth can be accelerated by

- A. the absence of a permanent replacement.
- B. the premature loss of the adjacent primary teeth.
- C. the presence of premature occlusal contact.
- D. inflammation of the pulp.

A patient in the late mixed dentition stage has an end-to-end first molar relationship with normal skeletal and incisor relationships. What is the most probable occlusal relationship at age 20?

- A. Angle Class II without anterior overlap.
- B. Angle Class II with anterior overlap.
- C. Angle Class I without anterior overlap.
- D. Angle Class I with anterior overlap.

A 3 year old patient complains of pain of the mouth and headaches for 24 hours. The clinical exam reveals bilateral painful regional lymphadenopathy and bad breath. Vesicles are seen on the hard palate, the soft palate, the gingiva, the tongue and the lips. The patient's temperature is 38.5°C. What is the most probable diagnosis?

- A. Erythema multiforme.
- B. Primary herpetic gingivostomatitis.
- C. Hand-foot-mouth disease.
- D. Herpetiform aphthous ulcers.

Which of the following is the most appropriate solution for controlling pulpal bleeding after a pulp exposure prior to pulp capping?

- A. Saline.
- B. Chlorhexidine.
- C. Sodium hypochlorite.
- D. Ferric sulfate.

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If a tooth has an inadequate ferrule, which of the following is/are effective strategies to increase tooth structure available for crown preparation?

1. Surgical crown lengthening.
  2. Sub-gingival preparation and prolonged temporization.
  3. Orthodontic eruption.
  4. Elective endodontic treatment gaining retention from a post in the root.
- A. (1) and (3)  
B. (2) and (4)  
C. (1) (2) (3)  
D. (4) only  
E. All of the above.

Posts in endodontically treated teeth should have

1. high strength.
  2. a low elastic limit to flex with the tooth.
  3. good radiopacity.
  4. bondability to tooth structure.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

When compared to parallel-sided posts, tapered posts

1. require less dentin removal.
  2. exert a wedge effect on the remaining dentin.
  3. are more consistent with root anatomy.
  4. provide better retention.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following will improve the prognosis of a rebonded fractured tooth fragment?

1. Total etching and dentin bonding.
  2. Use of a groove in the fragment.
  3. Having a single larger fragment to rebond.
  4. Reinforcing the fracture line with composite.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

When preparing a post space in a figure-8 shaped premolar, which of the following is/are appropriate?

1. Use one post in the straightest canal.
  2. Achieve post fit between the mesial and distal walls of the straightest canal.
  3. Extend core material 2mm apically in the nonposted section of the figure-8.
  4. Remove tooth structure to make an oval shaped canal.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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Which of the following is/are part of optimal post preparation procedure?

1. Use of non-end cutting rotary instruments.
  2. Minimal canal enlargement.
  3. Passive post fit.
  4. Diameter of the post that is half the width of the root.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following improves the prognosis of pulp vitality after indirect pulp capping?

1. Use of calcium hydroxide.
  2. Having a well sealed restoration.
  3. Reducing other traumas to the pulp.
  4. Removing all caries in the pulp cap area.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The most effective appliance to correct mid-face retrusion in the early mixed dentition is (a)

- A. inter-arch elastics.  
B. chin cup.  
C. reverse-pull headgear.  
D. bionator.

Temporary anchorage devices (TADS) have the greatest effect on which orthodontic movement?

- A. Extrusion.  
B. Torqueing.  
C. Intrusion.  
D. Tipping.

When using fixed orthodontic brackets, teeth will commonly

1. tip.
  2. translate.
  3. rotate.
  4. intrude.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following is/are a risk of orthodontic treatment?

1. Discomfort.
  2. Decalcification.
  3. Root resorption.
  4. Development of a craniofacial syndrome.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following is NOT a risk factor for primary molar ankylosis?

- A. Bruxism.  
B. Genetics.  
C. Trauma.  
D. Missing permanent successor.

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What is the most probable syndrome affecting a 9 year old patient with a history of 3 keratocystic odontogenic tumours (odontogenic keratocyst)?

- A. Nevoid basal cell carcinoma syndrome (Gorlin Syndrome).
- B. Familial colorectal polyposis (Gardner's Syndrome).
- C. Crouzon Syndrome.
- D. Apert Syndrome.

What is the dose of epinephrine in an EpiPen®Jr.?

- A. 0.15.
- B. 0.20.
- C. 0.25.
- D. 0.30.
- E. 0.35.

Which of the following is NOT an early clinical manifestation of local anesthetic overdose?

- A. Nystagmus.
- B. Slurred speech.
- C. Decreased heart rate.
- D. Increased respiratory rate.

Which of the following is NOT a manifestation of hyperglycemia?

- A. Moist skin.
- B. Acetone breath.
- C. Abdominal pain.
- D. Decreased consciousness.

For which of the following medical emergencies is atropine most commonly used?

- A. Anaphylaxis.
- B. Bradycardia.
- C. Bronchospasm.
- D. Hypotension.

Pulpectomy is the most appropriate treatment in a primary tooth with

- A. reversible pulpitis.
- B. advanced internal root resorption.
- C. advanced external root resorption.
- D. radicular pulp necrosis.

What is the most appropriate medication to control the dental pain following the adjustment of orthodontic appliances in a child?

- A. Acetaminophen.
- B. Ibuprofen.
- C. Naproxen.
- D. Aspirin.

Which of the following variables has the greatest effect on bond strength?

- A. Moisture control.
- B. Size of the bracket base.
- C. Type of acid etch.
- D. Composition of the resin cement.
- E. Patient oral hygiene.

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What is the dose of epinephrine in an Epi Pen®?

- A. 0.20 mg.
- B. 0.25 mg.
- C. 0.30 mg.
- D. 0.35 mg.
- E. 0.40 mg.

A patient with end-stage renal disease has several multilocular radiolucent lesions associated with vital mandibular teeth. A histopathologic analysis reveals the presence of multinucleated giant cells. The most appropriate management for this patient is to

- A. initiate endodontic treatments.
- B. perform a mandibular resection.
- C. extract the involved teeth.
- D. obtain a serum parathormone (PTH) level.
- E. commence antibiotic therapy.

A pale 8 year old patient presents with generalized gingival enlargement with spontaneous bleeding. Which of the following is most appropriate to establish the diagnosis?

- A. Excisional biopsy.
- B. Obtain a cytologic smear from the gingiva.
- C. Order a complete blood count.
- D. Obtain bacterial cultures.

A benign neoplasm of bone is called a/an

- A. fibrous dysplasia.
- B. osteoma.
- C. torus.
- D. sarcoma.
- E. osteosarcoma.

Increased bleeding is associated with a prolonged administration of

- 1. warfarin.
- 2. codeine.
- 3. acetylsalicylic acid.
- 4. acetaminophen.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The following are possible effects of acetylsalicylic acid EXCEPT

- A. reduction of fever.
- B. shortening of bleeding time.
- C. suppression of inflammatory response.
- D. bleeding from the gastrointestinal tract.

Which of the following best describes drug synergism?

- A. The effect of the combination of two drugs is equal to the sum of their individual effects.
- B. The effect of the combination of two drugs is greater than the sum of their individual effects.
- C. The effect of the combination of two drugs is less than the sum of their individual effects.
- D. One drug's action blocks the effect of the second drug's action.

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The majority of nitrous oxide is eliminated from a patient's circulatory system through the

- A. lungs.
- B. kidneys.
- C. liver enzymes.
- D. plasma.
- E. GI tract.

The most common presenting feature of bilateral maxillary constriction is

- A. diastemas.
- B. deep overbite.
- C. increased overjet.
- D. unilateral crossbite.

An anterior open bite is commonly associated with

- A. a horizontal growth pattern.
- B. a functional shift.
- C. an associated habit.
- D. a normal swallowing reflex.

Which of the following is/are correct?

- A. Basal and alveolar bone are histologically identical.
- B. Basal and alveolar bone respond identically to pressure.
- C. Osteoid is a highly mineralized bundle bone.

Marginal gingiva

- A. is demarcated from the attached gingiva by the free gingival groove.
- B. is demarcated from the attached gingiva by the mucogingival junction.
- C. is firmly attached to the tooth.

In chronic periodontitis, the causative microorganisms are found in

- 1. the periodontal ligament.
- 2. the connective tissues of the gingiva.
- 3. the alveolar bone.
- 4. the periodontal pocket.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The effects of plaque on vascularity of the gingival connective tissue result in

- 1. dilation of small blood vessels.
- 2. increased vascular permeability.
- 3. proliferation of small blood vessels.
- 4. increase in gingival crevicular fluid.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A suprabony pocket is associated with

- 1. enlargement of the marginal gingiva.
- 2. horizontal loss of alveolar bone.
- 3. subgingival calculus.
- 4. spontaneous bleeding.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Bruxism may be associated with

1. premature contacts in the centric relation.
  2. balancing prematurities.
  3. stress.
  4. anxiety.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Success of an endosseous dental implant is dependent upon

1. biocompatibility of the material.
  2. design.
  3. a period of non-function.
  4. immediate loading.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The function of the compensating curve is

- A. to help provide a balanced occlusion in complete dentures when the mandible is protruded.
- B. to aid in establishing an incisal guide plane.
- C. the same as the function of the curve of Spee.

Dislodgement of a maxillary complete denture may be caused by

1. under extension.
  2. improper occlusion.
  3. overextension.
  4. thickness of distobuccal flange.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

On a semi-adjustable articulator, the incisal guide table represents

- A. a reference point for the establishment of occlusal vertical dimension.
- B. the anterior equivalent of the condylar guidance.
- C. a mechanical equivalent of the horizontal and vertical overlap of the anterior teeth.
- D. the mechanical equivalent of the Curve of Wilson.

Which pontic type is best for a knife edge residual ridge where esthetics is not a major concern?

- A. Sanitary.
- B. Conical.
- C. Ridge lap.
- D. Modified ridge lap.

In an edentulous patient, the coronoid process

- A. limits the distal extent of the mandibular denture.
- B. affects the position and arrangement of posterior teeth.
- C. aids in determining the location of the posterior palatal seal.
- D. limits the thickness of the maxillary buccal denture flange.

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Which of the following removable partial dentures has the LEAST amount of rotation around the fulcrum?

- A. Kennedy Class I.
- B. Kennedy Class II.
- C. Kennedy Class III.

Which of the following are the most appropriate for use as overdenture abutments?

- A. Central incisors.
- B. Second premolars.
- C. Canines.
- D. First premolars.

Which of the following clinical findings is NOT associated with combination (Kelly's) syndrome?

- A. Reduction in morphologic face height.
- B. Advanced anterior maxillary ridge resorption.
- C. Down growth of the maxillary tuberosities.
- D. Advanced alveolar bone resorption under the posterior partial denture base areas.

A cast partial denture replacing teeth 3.5 - 3.8 and 4.5 - 4.8 was permanently relined with acrylic resin. At the delivery appointment, when the rests of the framework are fully seated on the abutment teeth, the denture base does not contact the supporting tissues. The most likely cause of the problem is

- A. the denture reline resin shrunk during polymerization.
- B. excess pressure was placed on the rests during the impression procedure.
- C. excess pressure was placed on the denture base area during the impression procedure.
- D. the patient's tissues have remodelled.

Which of the following could cause clicking sounds during speech in denture wearers?

- A. Excessive vertical dimension.
- B. Nonbalanced occlusion.
- C. Excessive buccal flange thickness.
- D. Reduced vertical overlap (overbite).

A characteristic of a group function occlusion is

- A. the teeth on the nonworking side contact in lateral excursion.
- B. the teeth on the working side contact in lateral excursion.
- C. the canine and lateral incisors contact in lateral excursion.
- D. the posterior teeth on both working and nonworking sides contact in lateral excursion.

A laboratory remount of processed dentures is done in order to correct occlusal disharmony produced by errors primarily in the

- A. mounting of the casts on the articulator.
- B. registration of jaw relation records.
- C. processing of acrylic dentures.
- D. registration of condylar guidance.

Radiographic examination reveals early evidence of internal resorption. The most appropriate management is

- A. apical surgical intervention.
- B. immediate pulp extirpation.
- C. immediate pulpotomy.
- D. observation and re-evaluation in 3-6 months.
- E. calcium hydroxide pulpotomy.

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The function(s) of the reciprocal clasp arm is/are to

1. act as an indirect retainer.
  2. stabilize the abutment teeth.
  3. act as a direct retainer for the distal base.
  4. counteract any force transmitted by the retentive arm.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The inferior border of the lingual bar of a removable partial denture should

- A. displace the lingual frenum.  
B. be in contact with the cingula of the incisor teeth.  
C. be superior to the gingival border.  
D. be as inferior as the movement of the frenum of the tongue will permit.

In a free-end distal extension partial denture, the most effective means of limiting applied loads to abutment teeth is by

- A. splinting abutments to adjacent teeth.  
B. using the abutment teeth without splinting.  
C. using monoplane denture teeth.  
D. maintaining a stable base-tissue relationship.

Conversion of a flush terminal plane to a mesial step/Class I terminal plane in the absence of orthodontics is primarily the result of

- A. loss of the mandibular primate space.  
B. greater maxillary than mandibular forward growth.  
C. differences in leeway between the maxillary and mandibular arches.  
D. distal movement of the maxillary first permanent molars.

When a removable partial denture is fabricated to occlude with natural teeth, the occlusal form of the artificial teeth is influenced by the

- A. endodontic condition of the abutment teeth.  
B. occlusal form of the remaining teeth.  
C. need to produce a fully balanced occlusion.

Which of the following should be evaluated for surgical removal before new complete dentures are fabricated?

1. Mandibular tori.
  2. Epulis fissuratum.
  3. Papillary hyperplasia.
  4. Sharp, prominent mylohyoid ridges.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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When a partial denture is to be fabricated where occlusal adjustment of the natural teeth is required, this should be performed

- A. prior to taking the final impressions.
- B. prior to registering centric relation but after final impression taking.
- C. after the framework has been constructed.

The mesial furcation of the permanent maxillary first molar is best assessed from which aspect of the tooth?

- A. Mesiobuccal.
- B. Mesiopalatal.
- C. Midmesial.

Diazepam

- 1. is a benzodiazepine.
  - 2. is contraindicated in a patient with acute narrow angle glaucoma.
  - 3. is anxiolytic.
  - 4. produces amnesia.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following may affect probing depth measurements of a periodontal pocket?

- 1. Probing force.
  - 2. Diameter of the probe tip.
  - 3. Angulation of the probe.
  - 4. Subgingival calculus.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The most common form of periodontal disease is

- A. gingivitis.
- B. chronic periodontitis.
- C. gingival hyperplasia.
- D. aggressive periodontitis.

Gingivitis is characterized by

- A. bleeding on probing.
- B. loss of attachment.
- C. alveolar bone loss.
- D. apical migration of the junctional epithelium.

A crown margin can be extended subgingivally when required

- 1. for esthetics.
  - 2. to increase retention.
  - 3. to reach sound tooth structure.
  - 4. for caries prevention.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A patient with periodontal disease may complain of

- 1. loose teeth.
  - 2. bleeding gingiva.
  - 3. pain.
  - 4. gingival recession.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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A major clinical problem of penicillin therapy is its

- A. high toxicity.
- B. allergenicity.
- C. rapid development of tolerance.
- D. narrow spectrum.

Which of the following anesthetic agents is/are metabolized by plasma cholinesterase?

- 1. Prilocaine.
  - 2. Lidocaine.
  - 3. Mepivacaine.
  - 4. Procaine.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following drugs has/have sedative properties?

- 1. Benzodiazepines.
  - 2. Barbiturates.
  - 3. Meperidine.
  - 4. Phenytoin.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Properties of glutaraldehyde include

- 1. rapid formation of cross linkages which limit penetration of pulp tissue.
- 2. minimal effect on pulp tissues.
- 3. excellent disinfection against oral flora.
- 4. minimal effectiveness against viruses and spores.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Bioavailability of orally administered drugs may be influenced by

- 1. formulation of the drug.
- 2. gastrointestinal perfusion.
- 3. pH of the gastrointestinal tract.
- 4. presence of other substances in the gastrointestinal tract.

- A. (1) (2) (3)
- B. (1) and (2)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Propoxyphene has the potential for drug abuse because

- A. it is a potent analgesic with a euphoriant activity equal to morphine.
- B. in combination with alcohol its effects are greatly intensified.
- C. it cannot be detected in the bloodstream.

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Nitrous oxide

1. provides good muscle relaxation.
  2. is non-explosive and non-flammable.
  3. is a potent anesthetic.
  4. provides rapid induction and recovery.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following will produce hemostasis when applied topically?

1. Oxidized cellulose.
  2. Absorbable gelatin sponge.
  3. Microfibrillar collagen.
  4. Topical bovine thrombin.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Advantages of resin bonded bridges are

1. tooth structure conservation.
  2. short chair-side time.
  3. lower cost for patient.
  4. improved esthetics compared to traditional bridges.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Diagnostic casts for a fixed bridge allow the dentist to

1. visualize the direction of the occlusal forces.
  2. assess occlusion more accurately.
  3. plan the pontic design.
  4. assess the esthetics using a diagnostic wax-up.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The surgical risk for a patient with organic heart disease depends upon

- A. cardiac reserve.  
B. blood pressure.  
C. respiration.  
D. pulse rate.  
E. cardiac output.

A sedative drug should

- A. cause excitement.  
B. eliminate all sensation.  
C. produce unconsciousness.  
D. produce a mild state of central nervous system depression.

Adequate position of a needle in the lumen of a blood vessel for a venipuncture is confirmed by the

- A. presence of blood upon aspiration.  
B. rapidity of filling of the syringe upon aspiration.  
C. pain associated with vessel puncture.

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Which of the following drugs will influence your periodontal treatment planning?

1. Insulin.
  2. Cortisone.
  3. Nitroglycerin.
  4. Warfarin.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following antibiotics is the most appropriate for a patient with an open fracture of the mandible?

- A. Clarithromycin.
- B. Tetracycline.
- C. Amoxicillin.
- D. Erythromycin.

Which of the following nerves are anesthetized by an infraorbital nerve block?

1. Palpebral.
  2. Lateral nasal.
  3. Labial.
  4. Zygomatico-facial.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Leeway space is most efficiently maintained by a/an

- A. lingual arch.
- B. tongue crib.
- C. anterior bite plate.
- D. functional appliance.

The terminal plane relationship of primary second molars determines the

- A. arch length between permanent second molars.
- B. future anteroposterior positions of permanent first molars.
- C. vertical dimensions of the mandible upon eruption of permanent first molars.
- D. amount of leeway space that is available for permanent premolars and canines.

What is the most appropriate appliance to correct an Angle Class I malocclusion with a labially tipped maxillary central incisor and spacing in a 15 year old patient?

- A. Growth modification appliance.
- B. Hawley with an active labial bow.
- C. Molar distalizing appliance.
- D. Bilateral expansion appliance.

Premature loss of mandibular primary cuspids in Angle Class I and Class II cases results in increased

1. overjet.
  2. arch width.
  3. overbite.
  4. leeway space.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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What is the most appropriate management of an ectopically erupting premolar with the primary predecessor firmly in place?

- A. Natural exfoliation of the primary tooth.
- B. Luxation of the primary tooth.
- C. Extraction of the primary tooth and monitor.
- D. Extraction of the primary tooth and space maintenance.

A 12 year old patient has the following cephalometric values:

SNA =  $87^{\circ}$  (N =  $82^{\circ}$ )

SNB =  $80^{\circ}$  (N =  $80^{\circ}$ )

Mandibular Plane Angle =  $32^{\circ}$  (N =  $32^{\circ}$ )

FMA =  $26^{\circ}$  (N =  $26^{\circ}$ )

The patient is a skeletal Angle Class II with a

- A. normally protrusive maxilla and a retrognathic mandible.
- B. protrusive maxilla and an orthognathic mandible.
- C. protrusive maxilla and a retrognathic mandible.
- D. retrusive maxilla and an orthognathic mandible.

The occlusal parameter most useful to differentiate between an overbite of dental or skeletal origin is the

- A. mandibular curve of Spee.
- B. mandibular curve of Wilson.
- C. maxillary curve of Wilson.
- D. maxillary incisors morphology.
- E. maxillary lip length.

A 10 year old patient with a lateral functional shift due to a maxillary bilateral posterior crossbite

- 1. should not be treated until growth is complete.
- 2. should be diagnosed in maximum intercuspation.
- 3. requires rapid palatal expansion.
- 4. has a centric occlusion-centric relation (CO-CR) shift caused by occlusal interferences.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

Which of the following is/are side effects of rapid maxillary expansion?

- 1. increase in the vertical dimension.
- 2. mesial movement of the maxilla.
- 3. increase in the maxillary inter-molar width.
- 4. increase in the mandibular inter-molar width.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Early orthodontic treatment of a retrognathic mandible should occur

- A. before age 5.
- B. between the ages of 6 and 8.
- C. just prior to the pubertal growth spurt.
- D. after skeletal maturity.

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Increased overjet, moderate facial convexity and a deep labio-mental sulcus is most characteristic of which facial type?

- A. Prognathic.
- B. Orthognathic.
- C. Retrognathic.

The most common order of serial extraction in the maxillary arch is

- A. primary canines, first premolars, primary first molars.
- B. primary canines, primary first molars, first premolars.
- C. first premolars, primary canines, primary first molars.
- D. primary first molars, primary canines, first premolars

A previously well-controlled periodontal patient now demonstrates the presence of bleeding in 60% of sites and significantly increased probing depths. The patient has most likely developed

- A. diabetes mellitus.
- B. hyperchromatosis.
- C. osteoporosis.
- D. hypercalcemia.

Cephalosporins

- 1. may be cross-allergenic with penicillin.
  - 2. have a narrower spectrum than penicillin.
  - 3. have a mechanism of action similar to that of penicillin.
  - 4. may cause cholestatic hepatitis.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following drugs has/have antisialagogue properties?

- 1. Acetaminophen.
  - 2. Atropine.
  - 3. Acetylsalicylic acid.
  - 4. Scopolamine.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A pontic exerting too much pressure against the ridge may cause

- 1. fracture of the solder joints.
  - 2. hypertrophy of the soft tissue.
  - 3. crazing of the gingival portion of the porcelain.
  - 4. resorption of the alveolar bone.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which patient is LEAST likely to be predisposed to liver toxicity following a dose of 1,000 mg of acetaminophen?

- A. An adult with liver cirrhosis.
- B. A chronic alcoholic.
- C. A diabetic.
- D. A 15kg, 4 year old child.

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The shape of the distobuccal flange of a mandibular denture is determined by the

1. buccinator muscle.
  2. tendon of the temporal muscle.
  3. masseter muscle.
  4. external oblique ridge.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Local anesthetics interfere with the transport of which of the following ions?

- A. Sodium.  
B. Calcium.  
C. Chloride.  
D. Potassium.  
E. Magnesium.

Following periodontal flap surgery, the most common cause of recurrence of pockets is

- A. systemic disease.  
B. traumatic occlusion.  
C. failure to splint.  
D. poor oral hygiene.

What is the primary etiologic factor for generalized aggressive periodontitis?

- A. Altered lymphocyte activity.  
B. Generalized subgingival calculus.  
C. Impaired polymorphonuclear phagocytosis.  
D. Bacterial plaque.

A significant mechanism by which acetylsalicylic acid produces its analgesic and anti-inflammatory effect is

- A. antagonism of histamine.  
B. inhibition of prostaglandin synthesis.  
C. local anesthetic effect on pain fibres.  
D. release of adrenal steroids from the adrenal cortex.  
E. synaptic inhibition in the dorsal column.

The amount of radiation is best reduced by

- A. using collimation.  
B. decreasing the object-film distance.  
C. lowering kVp and increasing milliamperage.  
D. decreasing the target-object distance.

Overlapped interproximal contacts in a bite-wing radiograph are caused by an X-ray tube cone

- A. with incorrect vertical angulation.  
B. with incorrect horizontal angulation.  
C. of incorrect length.  
D. of incorrect shape.

The most appropriate radiograph to assess an interproximal vertical bony defect of the alveolar bone is the

- A. bite-wing.  
B. periapical.  
C. occlusal.  
D. panoramic.

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Appropriate collimation of the X-ray beam for the film size reduces

1. image definition.
2. secondary radiation.
3. radiographic contrast.
4. radiation dose.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

Which radiographic examination provides the most diagnostic information for the replacement of a permanent mandibular first molar with an osseointegrated implant?

- A. Periapical.
- B. Occlusal.
- C. Panoramic.
- D. Cone beam computed tomography.

What is the most likely diagnosis of a small well-circumscribed radiolucency at the apex of a vital mandibular incisor?

- A. a periapical granuloma.
- B. sclerosing osteitis.
- C. a radicular cyst.
- D. periapical cemental dysplasia.

Multiple radiolucent lesions of the jaws are features of

1. hyperparathyroidism.
2. multiple myeloma.
3. basal cell nevus syndrome.
4. hyperthyroidism.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

Pontic design for a metal-ceramic bridge should

1. provide for a rigid restoration.
2. allow for complete coverage of the metal by the porcelain.
3. place the porcelain metal joint away from the soft tissues.
4. control thermal conductivity.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following is/are possible side effect(s) of codeine?

1. Respiratory depression.
2. Nausea.
3. Drowsiness.
4. Diarrhea.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Which of the following should be considered when assessing the difficulty of removal of an impacted mandibular third molar?

1. angulation.
2. root width.
3. depth in the alveolus.
4. periodontal ligament space.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Radiographs of a periodontally related osseous defect can be used to confirm the

- A. number of bony walls.
- B. measurement of the defect.
- C. location of the epithelial attachment.
- D. presence of a furcation involvement.

Radiographs of a periodontally related osseous defect show the

- A. number of bony walls.
- B. measurement of the defect.
- C. location of the epithelial attachment.
- D. loss of crestal cortication.

The Plaque Index of Silness and Loe measures

- A. quantity of plaque at the gingival margin.
- B. colony forming units of Gram-negative bacteria.
- C. weight of plaque obtained from facial surfaces.

If there is insufficient arch space for a permanent tooth to erupt, the tooth may

- A. cause resorption of the root of another tooth.
- B. erupt out of position.
- C. not erupt.
- D. All of the above.

A shift from bilateral crossbite with coincident midlines to a right-sided posterior crossbite with non-coincident midlines most likely indicates

- A. severe temporomandibular dysfunction.
- B. a true unilateral crossbite.
- C. occlusal interference and functional shift.

When probing a healthy gingival sulcus with a 20g force, the tip of the periodontal probe is most likely located

- A. coronal to the junctional epithelium.
- B. at the level of the junctional epithelium.
- C. apical to the junctional epithelium.

Denture stomatitis can be associated with

1. candida albicans infection.
2. xerostomia.
3. inadequate denture hygiene.
4. ill-fitting dentures.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Movement of a mandibular distal extension (Class 1) partial denture away from the denture bearing tissues when the patient opens is primarily caused by

- A. group function occlusion.
- B. non-passive retentive arms.
- C. overextended borders.

Procaine is a local anaesthetic which is chemically classified as an

- A. amide.
- B. ester.
- C. aldehyde.
- D. ethamine.
- E. aminide.

The selection of a vasoconstrictor for a local anesthetic depends upon the

- 1. duration of the procedure.
  - 2. need for hemostasis.
  - 3. medical status of the patient.
  - 4. type of procedure.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Local anesthetics

- A. do not readily pass the blood-brain barrier.
- B. interfere with the propagation of action potentials in nerve fibres.
- C. selectively interfere with the propagation of action potentials in nociceptive fibres.
- D. do not have an effect on any other tissue than the nervous tissue.

The periodontal probe should be inserted into the gingival sulcus

- A. parallel to the long axis of the tooth.
- B. parallel to the root surface.
- C. with a firm pushing motion.
- D. with a firm lateral motion.

In an infrabony periodontal pocket, the tip of the periodontal probe is located

- A. at the level of the alveolar crest.
- B. coronal to the level of the alveolar crest.
- C. apical to the level of the alveolar crest.

When developer solution is old and oxidized, radiographs will appear

- A. blue.
- B. brown.
- C. gray.
- D. black.

Which of the following radiographs is best to diagnose caries and early alveolar bone loss?

- A. Periapical.
- B. Occlusal.
- C. Bitewing.
- D. Lateral jaw.
- E. Panoramic.

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Tooth reduction for anterior tooth preparation for metal-ceramic and all ceramic crowns is dictated by which of the following factor(s)?

1. Crown length for adequate retention-resistance.
  2. Porcelain/ceramic thickness for fracture resistance.
  3. Clearance for occlusal function.
  4. Parallelism of axial walls for facilitating the path of insertion.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

In drug synergism

- A. the effect of the combination of two drugs is greater than the sum of their individual effects.
- B. a drug accumulates in the body at a faster rate than it is destroyed or removed.
- C. a drug is concentrated in the kidneys.
- D. a drug produces active metabolites.
- E. the concentration of the drug increases with time.

Dental implants are CONTRAINDICATED in patients who

1. are over age 80.
  2. have unrepaired cleft palates.
  3. are taking anticoagulants.
  4. have uncontrolled diabetes mellitus.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Increasing the kilovoltage results in greater

1. gamma radiation.
  2. penetration.
  3. collimation.
  4. secondary radiation.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only.  
E. All of the above.

Orthodontic tooth movement is generally more efficient with adolescents than in adults because of the difference in

1. tissue/bone reaction.
  2. the rate of growth.
  3. the quality of cooperation.
  4. the crown/root ratio.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Following very early loss of a primary tooth, the eruption of the permanent successor could be

1. unaltered.
  2. accelerated.
  3. delayed.
  4. arrested.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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Which permanent tooth usually erupts first?

- A. Maxillary central incisor.
- B. Maxillary canine.
- C. Mandibular first molar.
- D. Mandibular central incisor.

A patient with bruxism is likely to demonstrate

- 1. radiographic evidence of the widening of the periodontal ligament.
- 2. increased mobility of teeth.
- 3. premature wear of occlusal surfaces.
- 4. TMJ discomfort.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The signs of chronic periodontitis include

- 1. inflammation.
- 2. loss of attachment.
- 3. bone resorption.
- 4. periodontal pockets.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Migration of teeth may be associated with

- 1. lip habits.
- 2. tongue habits.
- 3. bruxism.
- 4. periodontitis.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Corticosteroids may be used for the management of

- 1. allergy.
- 2. arthritis.
- 3. asthma.
- 4. Addison's disease.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which properties increase the tendency of a drug to cross cell membranes?

- A. Non-ionized and high lipid solubility.
- B. Non-ionized and low lipid solubility.
- C. Ionized and low lipid solubility.
- D. Ionized and water solubility.

When a simple tipping force is applied to the crown of a single-rooted tooth, the centre of rotation is located

- A. at the apex.
- B. at the cervical line.
- C. within the apical half of the root.
- D. within the cervical one third of the root.

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The optimal time for orthodontic treatment involving growth modification is during the

- A. late primary dentition.
- B. early mixed dentition.
- C. late mixed dentition.
- D. early permanent dentition.

Ionization of local anesthetics is facilitated by a tissue pH

- A. above 7.4.
- B. at 7.4.
- C. below 7.4.

Prolonged heavy orthodontic forces may result in

- 1. hyalinization of periodontal ligament.
  - 2. devitalization of the teeth.
  - 3. pain.
  - 4. inefficient tooth movement.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Signs and symptoms of occlusal traumatism are

- 1. pain.
  - 2. tooth mobility.
  - 3. radiographic evidence of increased periodontal ligament space.
  - 4. loss of pulp vitality.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The facial profile most often associated with an Angle's Class III malocclusion is

- A. concave.
- B. convex.
- C. straight.

During the extraction of a primary tooth, when is it appropriate to leave root tips in the socket?

- 1. There is no infection in the area.
- 2. Root tip size is less than 2 mm.
- 3. Tips will not interfere with ensuing restorative procedures.
- 4. Tips will not interfere with development or eruption of permanent teeth.

A metal in the wrought condition differs from the same metal in the cast condition in that

- 1. the grains are deformed and elongated.
  - 2. the yield strength and hardness are increased.
  - 3. the resistance to corrosion is decreased.
  - 4. if heated sufficiently, recrystallization can occur.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A 4 year old child has a chronically infected non-restorable primary first molar. The most appropriate management is to

- A. extract it and place a space maintainer.
- B. observe it until it exfoliates.
- C. extract it.
- D. observe it until it becomes symptomatic.

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An 8 year old child has an 8 mm diastema between teeth 1.1 and 2.1. This could indicate the presence of

1. an enlarged frenum.
  2. a cyst.
  3. one or more mesiodens.
  4. normal development.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Tetracycline will cause dentin discolouration when ingested at the age of

1. 6 months in utero.
  2. 2 years.
  3. 7 years.
  4. 14 years.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The rate limiting step of tooth movement is

- A. bone deposition.  
B. bone resorption.  
C. force application.  
D. occlusal interference.

An insulin-dependent diabetic patient has rushed in late for an early morning 1 hour long appointment. Which of the following should be verified? That

- A. a low-carbohydrate snack is available in case of an insulin reaction.  
B. the patient has taken his regular dose of insulin.  
C. the patient has eaten his regular morning breakfast.  
D. an extra dose of insulin is available in case of a hypoglycemic reaction.

Which of the periodontal ligament fibres are most commonly associated with orthodontic relapse?

- A. Oblique.  
B. Diagonal.  
C. Horizontal.  
D. Supracrestal.

Surgery of irradiated bone is complicated by the fact that the

1. original neoplasm may invade the area of surgery.
  2. bone becomes brittle.
  3. patients are immunocompromized.
  4. sclerosed blood vessels compromise healing.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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Which of the following clinical approaches would reduce the tendency to the post-extraction complication of dry socket?

1. Post-extraction socket dressing with topical chlorhexidine.
2. Pre-extraction control of pericoronitis.
3. Use of a pre-operative mouthrinse of 0.2% chlorhexidine gluconate.
4. Use of systemic antibiophylaxis.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Occipital and/or cervical extra-oral anchorage

1. enhances anterior tooth movement.
2. enhance mandibular forward growth.
3. restricts posterior tooth movement.
4. restricts maxillary forward growth.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Maxillary midline diastema can be caused by

1. a mesiodens.
2. congenitally missing lateral incisors.
3. a tongue thrust habit.
4. a thumb-sucking habit.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In which of the following patients can you safely extract a tooth in a dental office setting?

- A. Two weeks after a myocardial infarct.
- B. Four months into pregnancy.
- C. Suffering from Factor VIII deficiency.
- D. Presenting with bilateral submandibular space abscess.

What are the anticipated orthodontic side effects when uprighting a mesially tipped mandibular second molar with fixed appliances?

1. Extrusion of the second mandibular molar.
2. Lingual tipping of the second molar.
3. Intrusion of the buccal segment.
4. Buccal tipping of the buccal segment.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Fixed orthodontic appliances are generally more efficient than removable appliances because conventional fixed appliances

- A. provide 3-dimensional control of tooth movement.
- B. promote improved oral hygiene.
- C. provide intermittent force application.
- D. are individualized to each patient.

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Which of the following is/are clinical signs of gingivitis?

1. Loss of stippling.
2. Gingival hyperplasia.
3. Bleeding on probing.
4. Loss of attachment.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In gingivitis, the sulcular epithelium

1. is a barrier to bacterial invasion.
2. is permeable to bacterial enzymes and toxins.
3. may be ulcerated.
4. undergoes both degenerative and proliferative changes.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Gingivitis is associated with

1. bone loss.
2. cyanosis of gingival tissue.
3. the presence of minimal attached gingiva.
4. bleeding on probing.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The epithelial attachment does NOT migrate apically in

- A. aggressive periodontitis.
- B. gingival hyperplasia.
- C. chronic periodontitis.
- D. necrotizing ulcerative periodontitis.

Periodontitis is differentiated from gingivitis by the amount of

- A. plaque accumulation.
- B. apical migration of the epithelial attachment.
- C. gingival inflammation.
- D. discomfort of the patient.
- E. subgingival calculus.

During the extraction of an isolated maxillary second molar, the bony floor of the sinus is removed with the tooth. Your immediate treatment would be to

- A. place a large strip of iodoform gauze, filling the tooth socket.
- B. irrigate the sinus repeatedly and place a dressing in the tooth socket.
- C. approximate the soft tissue as accurately as possible without irrigating.
- D. prescribe an antibiotic and recall after 24hrs.

A 2cm, discrete, white lesion of the buccal mucosa has not resolved after elimination of all local irritants. The most appropriate management would be to

- A. cauterize it.
- B. apply toluidine blue staining.
- C. perform an incisional biopsy.
- D. re-examine at 6 month intervals.
- E. refer patient to family physician.

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Which of the following milliamperage/kilovoltage combinations results in an X-ray beam with the most penetration?

- A. 10kVp - 65ma.
- B. 85kVp - 5ma.
- C. 90kVp - 10ma.
- D. 65kVp - 15ma.
- E. 75kVp - 40ma.

The sharpness of a radiographic image can be improved by

- A. increasing the object-to-film distance.
- B. using a larger focal spot.
- C. using a larger collimator.
- D. increasing the focal spot-to-film distance.

Which of the following modifications is recommended when making radiographs on an 8 year old child compared to an adult?

- A. Increase the kVp.
- B. Reduce the exposure time.
- C. Increase the mA.
- D. Use a lower speed receptor.

The depth of penetration of X-rays depends on the

- 1. milliamperage.
- 2. density of the subject.
- 3. exposure time.
- 4. kilovoltage.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Excessively dark radiographs are the result of

- 1. underdevelopment.
- 2. overexposure.
- 3. backward placement of the film.
- 4. excessive milliamperage.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Radiation dose to the patient is reduced by

- 1. using a high speed film.
- 2. using an aluminum filter.
- 3. increasing the target-film distance.
- 4. using low kVp.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A daily dose of 81 mg of acetylsalicylic acid is used for its

- A. analgesic properties.
- B. antipyretic effect.
- C. antiplatelet action.
- D. anti-inflammatory function.

Probing depth reduction following scaling and root planing alone will occur if the patient's periodontal condition includes

- A. hyperemic and edematous gingival tissue.
- B. gingival hyperplasia due to phenytoin therapy.
- C. chronic periodontal pockets.
- D. necrotizing ulcerative gingivitis.

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Minor tooth movement to correct an inclined fixed partial denture abutment will

1. enhance resistance form of the abutment.
  2. reduce the possibility of pulpal exposure.
  3. direct occlusal forces along the long axis of the tooth.
  4. improve embrasure form.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All the above.

Which of the following is associated with the use of penicillin?

- A. High toxicity.  
B. Allergenicity.  
C. Development of tolerance.  
D. Renal failure.

Which of the following barbiturates can be used to reduce the frequency of seizures in persons with grand mal seizure disorder?

- A. Thiopental.  
B. Amobarbital.  
C. Secobarbital.  
D. Pentobarbital.  
E. Phenobarbital.

Which of the following is/are vital signs?

- A. Pulse and respiratory rate.  
B. Complete blood count.  
C. Pupil size and reactivity.  
D. Height and weight.

For an acute bacterial infection, the most valuable laboratory test(s) is/are the

1. hemoglobin level.
  2. white blood cell count.
  3. red blood cell count.
  4. culture and sensitivity test.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following is/are vital signs?

1. Blood pressure.
  2. Body temperature.
  3. Pulse and respiratory rate.
  4. Pupil size.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

For a removable partial denture, tripoding a cast is used to

- A. determine the path of insertion.  
B. locate unfavorable tissue undercuts.  
C. locate the height of contour.  
D. return the cast to the surveyor.

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A preparation for a metal-ceramic crown with a porcelain butt joint margin should have a

1. 90° cavosurface margin.
2. subgingival finish line.
3. 1.2mm shoulder.
4. 90° axiokingival angle.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The average annual dose of ionizing radiation that a patient receives from dental radiographs is

- A. greater than the average amount received from natural sources.
- B. about the same as the average amount received from medical sources.
- C. about the same as the average amount received from cosmic radiation.
- D. low when compared to the average total amount of radiation received.

Overlapping contacts on a bitewing radiograph result from the

1. malalignment of teeth.
2. increased vertical angulation of the x-ray beam.
3. incorrect horizontal angulation of the x-ray beam.
4. decreased vertical angulation of the x-ray beam.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The main purpose of X-ray collimation is to

- A. lower the kilovoltage.
- B. filter out low energy X-rays.
- C. reduce the diameter of the primary beam.
- D. reduce the exposure time.

For a removable partial denture, a metal base is preferred to an acrylic base because metal is

1. more hygienic.
2. stronger.
3. less irritating.
4. a better thermal conductor.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

What is the alloy of choice for the framework of a resin-bonded fixed bridge?

- A. Nickel-chromium.
- B. Gold-palladium.
- C. Gold-silver.
- D. Gold-platinum-palladium.

A 60 year old patient requests the replacement of tooth 4.6, which was extracted many years ago. Tooth 1.6 has extruded 1.8mm into the space of the missing tooth. The three unit fixed bridge replacing the mandibular first molar should be fabricated

- A. to the existing occlusion.
- B. after extracting tooth 1.6 and replacing it with a fixed partial denture.
- C. after restoring tooth 1.6 to a more normal plane of occlusion.
- D. after devitalizing and preparing tooth 1.6 for a cast crown.

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An end result of ionizing radiation used to treat oral malignancies is

- A. deformity of the jaws.
- B. reduced vascularity of the jaws.
- C. increased vascularity of the jaws.
- D. increased brittleness of the jaws.

Which of the following is a sign of a severe toxic reaction to ketoconazole?

- A. Jaundice.
- B. Hypertension.
- C. Xerostomia.
- D. Salivary gland swelling.

Acute overdose of acetaminophen is most likely to lead to

- A. depression of the respiratory centre.
- B. severe gastric bleeding.
- C. hepatic toxicity.
- D. anaphylactic shock.

Epinephrine in a local anesthetic solution will

- 1. decrease absorption of the anesthetic.
  - 2. assist hemostasis at the site of injection.
  - 3. prolong the action of the anesthetic agent.
  - 4. assist in post-operative healing.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The short action of thiopental is due to

- A. rapid redistribution.
- B. rapid renal excretion.
- C. rapid metabolism.
- D. build up of tolerance.
- E. conjugation with serum proteins.

Glass ionomer cements contain

- A. zinc oxide and distilled water.
- B. zinc oxide and polyacrylic acid.
- C. fluoro aluminosilica powder and orthophosphoric acid.
- D. fluoro aluminosilica powder and polyacrylic acid.

A 78 year old patient presents with several carious lesions on the root surfaces of the maxillary posterior teeth. The restorative material of choice is a

- A. microfilled composite resin.
- B. hybrid composite resin.
- C. silver amalgam.
- D. glass ionomer cement.
- E. reinforced zinc oxide and eugenol cement.

The most likely cause of postoperative sensitivity with Class II composite resin restorations is

- A. acid etching of dentin.
- B. microleakage at the interface.
- C. toxicity of the restorative material.
- D. overheating during the finishing process.

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Methyl methacrylate resins will perform better than composite resins for long span, temporary bridges because of superior

- A. hardness.
- B. fracture toughness.
- C. wear resistance.
- D. dimensional stability.

The most frequent cause for composite resin restoration failure is

- A. brittleness of the composite.
- B. excessive polymerization shrinkage.
- C. presence of voids within the material.
- D. inadequate moisture control during placement.

A patient who is four months pregnant requires an extraction. A radiograph may

- A. be taken only for surgical purposes.
- B. be taken for diagnostic or treatment purposes.
- C. not be taken until end of second trimester.
- D. be taken by panoramic radiography only.

Adrenal corticosteroids

- A. increase heart rate.
- B. cause vasodilation.
- C. increase gastric motility.
- D. reduce inflammation.

An overdose of acetaminophen can result in

- A. nephrotoxicity.
- B. cardiotoxicity.
- C. neurotoxicity.
- D. hepatotoxicity.

Acetylsalicylic acid is indicated for the management of which of the following?

- A. Myocardial infarction.
- B. Asthma.
- C. Gastric ulcer.
- D. Hemophilia.

A silane coupling agent is used to

- A. control polymerization shrinkage in composite resins.
- B. enhance the bond between a porcelain veneer and the resin cement.
- C. reduce the surface tension when investing a wax pattern.
- D. facilitate the soldering of gold castings.

Antibiotic coverage should be provided when performing periodontal surgery for patients with

- A. myocardial infarction.
- B. dental implants.
- C. prosthetic heart valve.
- D. coronary artery disease.

The higher modulus of elasticity of a chromium-cobalt-nickel alloy, compared to a Type IV gold alloy, means that chromium-cobalt-nickel partial denture clasp will require

- A. a thicker cross section.
- B. a shorter retentive arm.
- C. more taper.
- D. a shallower undercut.

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The setting of a zinc-phosphate cement can best be retarded by

- A. decreasing the particle size.
- B. increasing the concentration of water in the liquid.
- C. increasing the rate of addition of the powder to the liquid.
- D. cooling the glass mixing slab.

Which of the following are characteristics of restorative glass ionomer cements?

- 1. Release of fluoride.
  - 2. Bonding to enamel.
  - 3. Setting is affected by moisture.
  - 4. Irritating to pulpal tissues.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The main reason for adding copper to a dental amalgam alloy is to

- A. increase expansion.
- B. reduce tarnish resistance.
- C. make amalgamation easier.
- D. reduce the tin-mercury phase.

What is the most appropriate time to extract a mesiodens?

- A. As soon as diagnosed.
- B. Just prior to the eruption of the first permanent molars.
- C. Just prior to the eruption of the maxillary central incisors.
- D. Just prior to the eruption of the maxillary canines.

Periapical surgery is CONTRAINDICATED for a tooth that has a

- A. large periapical lesion.
- B. fistula related to a periapical lesion.
- C. vertical root fracture.
- D. a post and core retained crown.

Fractures of the maxilla can best be diagnosed by

- 1. lateral jaw radiographs.
  - 2. clinical examination.
  - 3. evidence of periorbital edema.
  - 4. anteroposterior radiograph of the skull.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The coefficient of thermal expansion of the metal relative to the porcelain for constructing a metal-ceramic crown should be

- A. slightly less.
- B. the same.
- C. slightly more.
- D. significantly less.

Indirect retention is required for a removable partial denture which has

- 1. a unilateral distal extension base.
  - 2. bilateral distal extension bases.
  - 3. an anterior extension base.
  - 4. complete tooth support.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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Which of the following may be associated with a fracture of the mandible?

1. Diplopia.
2. Malocclusion.
3. Swelling of the orbit.
4. Pain.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A Le Fort I fracture is a

- A. fracture of the zygomatic arch.
- B. horizontal fracture of the maxilla.
- C. fracture involving the orbital floor.
- D. pyramidal fracture of the maxilla.
- E. cranio-facial dysjunction.

Stiffness of wire is a function of

1. length of the wire segment.
2. diameter of the wire segment.
3. alloy composition.
4. microstructure.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following anesthetic agents is/are metabolized by plasma cholinesterase?

1. Prilocaine.
2. Lidocaine.
3. Mepivacaine.
4. Procaine.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A 25 year old female in her first trimester of pregnancy presents with an acute dental infection. Which of the following is CONTRAINDICATED for this patient?

- A. Take a radiograph.
- B. Prescription of penicillin V.
- C. Administration of 2% xylocaine with 1:100,000 epinephrine.
- D. Acetylsalicylic acid for pain control.

A physical sign of impending syncope is

- A. pallor.
- B. elevation of blood pressure.
- C. tachycardia.

Which of the following is a CONTRAINDICATION for the use of a resin bonded fixed partial denture (acid etched bridge or "Maryland Bridge")?

- A. Angle Class II malocclusion.
- B. An opposing free end saddle removable partial.
- C. Previous orthodontic treatment.
- D. Heavily restored abutment.

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A pontic replacing a mandibular first molar should be designed so that it/its

1. gingival surface is concave and adapts closely to the ridge.
  2. has open gingival embrasures.
  3. conceals the porcelain to metal junction on its gingival surface.
  4. gingival surface is convex in all directions.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The width of the attached gingiva can be accurately measured if

- A. gingival inflammation in the area has been eliminated.  
B. there is an increase in crevicular fluid.  
C. the probing depth is 3mm or less.  
D. scaling has not been done.

A midfacial probing depth measurement where the base of the pocket extends beyond the mucogingival junction indicates that

- A. gingival hyperplasia is present.  
B. there is no attached gingiva.  
C. occlusal trauma is present.  
D. gingival recession is present.

Tranquilizers and hypnotics

1. are depressants of the respiratory centre.
  2. are depressants of the cerebral cortex.
  3. may cause physical dependency.
  4. may have convulsant effects.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

An endomorph is typically

- A. short and fat.  
B. tall and thin.  
C. an early maturer.  
D. a late maturer.

Anaphylactic reaction to penicillin is most likely to occur

1. when the drug is administered parentally.
  2. within minutes after drug administration.
  3. in patients who have already experienced an allergic reaction to the drug.
  4. in patients with a negative skin test to penicillin allergy.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Trauma from occlusion

- A. initiates gingivitis.  
B. affects the blood supply to gingivae.  
C. initiates periodontitis.

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The primary etiologic factor for gingivitis is

- A. a faulty restoration.
- B. ascorbic acid deficiency.
- C. dental calculus.
- D. occlusal trauma.
- E. dental plaque.

An acute lateral periodontal abscess associated with a lateral periodontal cyst can be differentiated from an acute abscess of pulpal origin by the

- A. type of exudate.
- B. intensity of pain.
- C. nature of swelling.
- D. degree of tooth mobility.
- E. response to a vitality test.

A furcation involvement in which the probe extends completely through the furcation is classified as

- A. incipient.
- B. Class I.
- C. Class II.
- D. Class III.

Thumbsucking after the age of six most often results in

- A. a dental malocclusion.
- B. a skeletal malocclusion.
- C. mouth breathing.
- D. temporomandibular disorder.

The most appropriate management for a patient with mild anterior crowding in an early mixed dentition is to

- A. strip all proximal contacts.
- B. extract the deciduous canines.
- C. perform a space analysis.
- D. regain space in the arch.

Leeway space is the difference in size between the

- A. maxillary and mandibular tooth material.
- B. primary and the permanent incisors.
- C. primary molars and the premolars.
- D. maxillary and the mandibular primate space.

The most commonly impacted permanent tooth is the

- A. mandibular second premolar.
- B. maxillary lateral incisor.
- C. mandibular canine.
- D. maxillary canine.

Which of the following drugs is a natural alkaloid obtained from opium?

- A. Hydromorphone.
- B. Meperidine.
- C. Methadone.
- D. Codeine.
- E. Morphine.

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The most effective drug for relief of angina pectoris is

- A. codeine.
- B. digitalis.
- C. quinidine.
- D. nitroglycerin.
- E. pentobarbital sodium.

Which of the following diseases predisposes a patient to exaggerated cardiovascular effects of epinephrine?

- A. Hyperparathyroidism.
- B. Hyperthyroidism.
- C. Hypogonadism.
- D. Acromegaly.

Pulp reactions to caries include all of the following, EXCEPT

- A. decrease in dentin permeability.
- B. tertiary dentin formation.
- C. evaporation of the intratubular fluid.
- D. inflammatory and immune reactions.

Facial nerve paresthesia is most likely to occur from which of the following injections?

- A. Posterior superior alveolar block.
- B. Inferior alveolar block.
- C. Posterior palatine block.
- D. Extraoral maxillary division block.

Antibiotics are indicated for management of which of the following conditions?

- A. Chronic apical abscess.
- B. Previously treated tooth with acute periapical periodontitis.
- C. Acute apical abscess with cellulitis.
- D. Irreversible pulpitis.

The penetration of a local anesthetic into nerve tissue is a function of the

- A. length of the central alkyl chain.
- B. lipid solubility of the un-ionized form.
- C. ester linkage between the aromatic nucleus and the alkyl chain.
- D. amide linkage between the aromatic nucleus and the alkyl chain.

Sodium hypochlorite in endodontic therapy dissolves

- A. only organic matter.
- B. only inorganic matter.
- C. both organic and inorganic matter

Needle deflection increases as

- A. depth of injection increases.
- B. needle length increases.
- C. needle gauge decreases.
- D. All of the above.

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The use of aspirating syringes for the administration of local anesthetics is recommended because

1. the effectiveness of local anesthesia is increased.
  2. aspiration of blood is proof that the needle is in an intravascular location.
  3. their use removes the hazard of rapid injection and provides a distinct saving of time.
  4. their use reduces the frequency of accidental intravenous injection.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

For a patient with cardiovascular disease, local anesthesia

- A. affects blood pressure more than general anesthesia.  
B. affects blood pressure less than general anesthesia.  
C. is responsible for bacteremia.

Which of the following is NOT a component of a dental cartridge containing 2% lidocaine with 1:100,000 epinephrine?

- A. Methylparaben.  
B. Water.  
C. Sodium metabisulphite.  
D. Sodium chloride.

Between the ages of 5 and 18 years, mandibular arch length

- A. increases 0-1mm.  
B. increases 3-4mm.  
C. decreases 0-1mm.  
D. decreases 3-4mm.

Lidocaine is an

- A. amide.  
B. ester.  
C. aldehyde.  
D. acid.

All of the following are possible effects of acetylsalicylic acid EXCEPT

- A. reduction of fever.  
B. shortening of bleeding time.  
C. suppression of inflammatory response.  
D. bleeding from the gastrointestinal tract.

When designing a removable partial denture, changing the tilt of the cast on the surveyor alters the

- A. path of insertion of the planned removable partial denture.  
B. the position of the survey line on the cast.  
C. the undercut and non-undercut areas.  
D. the direction of forces applied to the partial denture.

The central action of caffeine is principally on the

- A. cerebral cortex.  
B. corpus callosum.  
C. hypothalamus.  
D. spinal cord.

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Frankfort plane extends from

- A. Porion to Orbitale.
- B. Porion to Gnathion.
- C. Condylion to Gnathion.
- D. Condylion to Menton.

Which of the following drugs may cause generalized enlargement of interdental papillae?

- A. Digitalis.
- B. Nifedipine.
- C. Captopril.
- D. Propranolol.

Which of the following statements is true about diazepam? It

- A. improves performance of fine motor skills.
- B. causes amnesia.
- C. is available without prescription in Canada.
- D. does not produce a dependence syndrome.

When probing the sulcus of healthy gingiva, the tip of the periodontal probe extends

- A. to the coronal aspect of the epithelial attachment.
- B. to the alveolar bone crest.
- C. apical to the epithelial attachment.

In which of the following defects is bone regeneration most likely to occur?

- A. One-wall bony defect.
- B. Two-wall bony defect.
- C. Three-wall bony defect.

Presence of bleeding on probing

- A. is indicative of current inflammation.
- B. is indicative of past inflammation.
- C. has a high positive predictive value (PPV) for further attachment loss.

Tooth 4.5 was treated endodontically 2 years ago and is now sensitive to percussion. There is an isolated, narrow 8mm periodontal pocket on the buccal surface of the tooth. Radiographic findings are within normal limits. The most likely diagnosis is a/an

- A. endodontic lesion.
- B. vertical root fracture.
- C. chronic periodontal lesion.

Loss of sensation over the distribution of the inferior dental nerve is a possible complication of

- A. removal of an impacted mandibular third molar tooth.
- B. removal of a torus mandibularis.
- C. a forceps removal of a mandibular second molar.
- D. distal wedge periodontal surgery.

The highest incidence of congenitally missing lateral incisors is most likely seen in a patient with

- A. unilateral cleft lip and palate.
- B. congenital heart disease.
- C. Down syndrome.
- D. hyperthyroidism.

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Radiographically, the nasopalatine foramen may be misdiagnosed as a

1. branchial cyst.
  2. nasopalatine cyst.
  3. nasolabial cyst.
  4. radicular cyst.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following pontic designs is most likely to cause soft tissue irritation?

- A. Polished gold.
- B. Polished acrylic.
- C. Polished porcelain.
- D. Glazed porcelain.

A provisional crown must restore the

1. proximal contacts.
  2. axial contours of the tooth.
  3. occlusal function.
  4. esthetics.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Radiographically, an osteoma appears

- A. radiopaque.
- B. radiolucent.
- C. either radiopaque or radiolucent.
- D. radiolucent, surrounded by a radiopaque line.

Traumatic occlusion may cause

1. widening of the periodontal ligament space.
  2. vertical destruction of the interdental septum.
  3. decreased definition of the lamina dura.
  4. narrowing of the periodontal ligament space.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In the mandibular third molar region, a circumscribed radiolucent area 3cm in diameter contains the crown of the developing third molar. The radiolucent area suggests

- A. a simple bone cyst/traumatic bone cyst.
- B. a dentigerous cyst.
- C. Stafne's idiopathic bone cavity.
- D. an eruption cyst.

On a periapical radiograph, the nasopalatine foramen is located between the roots of the maxillary

- A. incisors above their apices.
- B. central and lateral incisors below their apices.
- C. central incisors below their apices.
- D. central and lateral incisors above their apices.

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Therapeutic doses of morphine administered intramuscularly may produce

1. constipation.
2. euphoria.
3. drowsiness.
4. dysphoria.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A discontinuous lamina dura may be a consequence of

1. pulpitis.
2. metastatic carcinoma.
3. parathyroid hyperplasia.
4. eburnated bone.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A 25 year old female in her third trimester of pregnancy presents with an acute dental infection. Which of the following is CONTRAINDICATED for this patient?

- A. Prescription of clindamycin.
- B. Prescription of penicillin V.
- C. Extraction using 2% lidocaine with 1:100,000 epinephrine.
- D. prescription of ibuprofen.

The radiographic images most suggestive of multiple myeloma is

- A. multiple radiopaque lesions.
- B. punched out radiolucent lesions.
- C. ground glass appearance.
- D. generalized hypercementosis.

The lamina dura is a/an

- A. regular radiolucent line around the roots.
- B. regular radiopaque line around the roots.
- C. irregular radiolucent line around the roots.

Which of the following entities can present as periapical radiolucencies?

1. A periapical granuloma.
2. A radicular cyst.
3. A metastatic carcinoma.
4. The mental foramen.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A periapical radiolucency associated with a vital maxillary central incisor can represent

1. a nasopalatine cyst.
2. a dentigerous cyst.
3. the foramen of the incisive canal.
4. a periapical granuloma.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Which of the following landmarks may be identified on periapical radiographs of the mandible?

1. External oblique ridge.
2. Mylohyoid ridge.
3. Mental foramen.
4. Coronoid process.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A well circumscribed 3mm radiolucency in the apical region of the mandibular second premolar may be

1. a periapical granuloma.
2. a periapical cyst.
3. a chronic periapical abscess.
4. the mental foramen.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which lesion/s may appear radiographically as multilocular radiolucencies?

1. Ameloblastoma.
2. Odontogenic myxoma.
3. Keratocystic odontogenic tumor.
4. Central giant cell granuloma.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A radiograph displaying a “cotton-wool” appearance and generalized hypercementosis is suggestive of

- A. fibrous dysplasia.
- B. osteopetrosis.
- C. osteogenesis imperfecta.
- D. Paget’s disease.
- E. cleidocranial dysplasia.

What is the most significant radiographic finding in hyperparathyroidism?

- A. Demineralization of teeth.
- B. Multiple keratocystic odontogenic tumors.
- C. Hypercementosis.
- D. Rampant caries.
- E. Generalized loss of lamina dura.

A mixed lesion with a radiolucent rim and corticated border causing impaction of a permanent tooth is most likely a/an

- A. adenomatoid odontogenic tumour.
- B. calcifying epithelial odontogenic tumour.
- C. odontoma.
- D. ameloblastic fibro-odontoma.

Which condition produces a radiopaque image?

- A. Osteomalacia.
- B. Multiple myeloma.
- C. Osteopetrosis.
- D. Letterer-Siwe disease.
- E. Central giant cell granuloma.

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A patient complains of acute pain 24 hours after the insertion of a restoration in a tooth with no pre-existing periapical pathology. The tooth is vital and tender to percussion. The radiograph will show

- A. an apical radiolucency.
- B. osteosclerosis.
- C. condensing osteitis.
- D. a normal apex.

When prescribing nonsteroidal anti-inflammatory drugs (NSAIDs), it is important to consider that prostaglandins

- A. impair blood coagulation.
- B. induce vasoconstriction.
- C. prevent edema.
- D. protect the gastric mucosa.

An alcoholic patient with bleeding tendencies may require injection of which vitamin prior to an extraction?

- A. Vitamin B<sub>12</sub>.
- B. Vitamin C.
- C. Vitamin D.
- D. Vitamin K.

Twenty-four hours following the simple extraction of tooth 4.7, a patient presents with severe bleeding from the extraction site. The most likely cause of this bleeding is a/an

- A. disturbance of the hemostatic plug.
- B. infection of the socket.
- C. undiagnosed coagulopathy.
- D. dry socket.

A mandibular fracture during normal mastication is most likely to occur in a patient with

- A. osteoporosis.
- B. a large intraosseous lesion.
- C. an impacted tooth at the inferior border.
- D. advanced alveolar atrophy.

The start of a mandibular bone formation coincides with

- A. tooth germ development.
- B. completion of fusion of the facial processes.
- C. bone formation in the maxilla.
- D. completion of a mandible cartilage model.

The x-rays which are most apt to be absorbed by the skin and cause an injury are

- A. central rays.
- B. deep penetrating rays.
- C. aluminum filtered rays.
- D. rays of long wave-length.

The highest risk of radiation-induced congenital malformation occurs during the

- A. first trimester.
- B. second trimester.
- C. third trimester.
- D. neonatal period.

Bite-wing radiographs are most valuable for detecting

- A. hyperemia of the pulp.
- B. occlusal carious lesions.
- C. proximal surface caries.
- D. cervical caries.

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The most appropriate radiograph(s) to determine the location of an impacted maxillary cuspid is/are

- A. occlusal.
- B. periapical.
- C. periapical and occlusal.
- D. panoramic.

“Ground glass” is the classical description of the radiographic appearance found in

- A. acute osteomyelitis.
- B. fibrous dysplasia.
- C. early periapical osseous dysplasia (periapical cemento-osseous dysplasia).
- D. Paget’s disease of bone.

During CPR, if a patient is not breathing but has a pulse, how often should a breath be given? Every

- A. 3-4 seconds.
- B. 5-6 seconds.
- C. 7-8 seconds.
- D. 9-10 seconds.

In a dental office, what is the most common cause of respiratory distress?

- A. Anaphylaxis.
- B. Bronchospasm.
- C. Hyperventilation.
- D. Myocardial infarction.

Extensive caries located only on the primary maxillary incisors of a 2 year old is generally indicative of

- A. fluorosis of the primary dentition.
- B. fever related hypoplasia.
- C. amelogenesis imperfecta.
- D. demand breast or bottle feeding.

Direct pulp capping of permanent teeth in children under the age of 12 years is most likely to be successful for

- A. teeth that are symptomatic.
- B. teeth that are hyperemic.
- C. teeth with open apices.
- D. pulp exposures 3-5mm in size.

Localized gingival recession of a permanent mandibular incisor in an 8 year old can be caused by

- A. vitamin C deficiency.
- B. ankyloglossia.
- C. localized aggressive periodontitis.
- D. traumatic occlusion.
- E. necrotizing ulcerative gingivitis.

After partial pulpotomy of a permanent central incisor in an 8 year old child, the most important clinical criterion of success is

- A. completion of root formation.
- B. retained natural colour of the tooth.
- C. pulp regeneration.
- D. formation of pulp stones.

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Which of the following conditions is the most likely cause of a maxillary midline diastema?

- A. Mesiodens.
- B. Space shortage.
- C. Gemination.
- D. Dens invaginatus.

The most important factor in stainless steel crown retention in a primary tooth is the

- A. preservation of the coronal bulge.
- B. maintenance of parallelism.
- C. placement of accessory grooves.
- D. insertion of retentive pins.

In the absence of its permanent successor, a primary first molar of a 7 year old

- A. should be treated endodontically to prevent root resorption.
- B. may remain for years with no significant resorption.
- C. should be extracted.
- D. is more susceptible to dental caries.

A diastema between two maxillary central permanent incisors could be associated with the followings, EXCEPT

- A. a mesiodens.
- B. a congenital absence of permanent maxillary lateral incisors.
- C. a large labial frenum.
- D. adenomatoid odontogenetic tumour.

The most appropriate management for a child with a primary tooth that caused a severe, throbbing toothache the previous night is to

- A. prescribe an analgesics.
- B. prescribe an antibiotic.
- C. remove carie and place a temporary restoration.
- D. perform a pulpotomy.
- E. perform a pulpectomy.

Ankylosed primary second molars may clinically exhibit

- A. percussion sensitivity.
- B. discolouration.
- C. temperature sensitivity.
- D. buccolingual displacement.
- E. infra-occlusal position.

To minimize fractures of amalgam restorations in primary teeth, cavity preparations should have

- A. concave pulpal floors.
- B. rounded axiopulpal line angles.
- C. bevelled cavosurface margins.
- D. lateral walls parallel to the external surface of the tooth.

In a 4 year old the most appropriate treatment for a chronically infected, non-restorable primary first molar is to

- A. extract it and place a space maintainer.
- B. observe it until it exfoliates.
- C. extract it only.
- D. observe it until it becomes symptomatic.

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The extraction of a primary maxillary central incisor at the age of 6 years will cause

- A. loss of intercanine space.
- B. increased intercanine space.
- C. no change in intercanine space.
- D. decreased overjet.

Which of the following is an indication for a pulpotomy on a primary tooth?

- A. Radiographic evidence of internal root resorption.
- B. Involvement of interradicular bone with no fistula.
- C. Involvement of interradicular bone with a fistula.
- D. Signs and symptoms of reversible pulpitis.

A 6 year old child has a non-vital primary mandibular second molar which has a draining sinus tract from the bifurcation area. The most appropriate management is

- A. extraction.
- B. observation.
- C. pulpotomy.
- D. direct pulp capping.

Following the extraction of a primary first molar in a 4 year old child, the most appropriate management is to

- A. regularly assess the arch development.
- B. perform space analysis.
- C. insert a space maintainer.
- D. extract the contra-lateral molar.
- E. extract the opposing molar.

Which of the following is the most important preventive therapy for an 8 year old living in a non-fluoridated community, with closed contacts in the posterior quadrants and disto-occlusal restorations on all primary first molars?

- A. Daily sodium bicarbonate rinse.
- B. Fluoride varnish at 1 month intervals.
- C. Weekly 0.2% NaF rinse.
- D. Twice daily brushing with fluoride toothpaste.

In a child with a high caries risk, the most appropriate cement for a band and loop space maintainer is

- A. zinc phosphate.
- B. glass ionomer.
- C. zinc oxide eugenol.
- D. polycarboxylate.

The most important factor in determining the dosage of systemic fluoride supplementation is

- A. daily water consumption.
- B. climate.
- C. water fluoride concentration.
- D. total daily fluoride intake.

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A child has received a successful inferior alveolar nerve block using 1.5ml of 2% lidocaine with 1:100,000 epinephrine. However, during placement of a rubber dam clamp on the first permanent molar, the child complains that the “tooth ring” is hurting. Which of the following is the most appropriate management?

- A. Wait 15 minutes until more profound anesthesia is achieved.
- B. Anesthetize the lingual nerve with the remaining lidocaine.
- C. Anesthetize the long buccal nerve with the remaining lidocaine.
- D. Proceed with treatment without rubber dam.

The radiographs of a 9 year old with tooth 1.1 completely erupted and tooth 2.1 unerupted reveal a palatally located mesiodens. The most appropriate management is to

- A. monitor the eruption of 2.1 for another year.
- B. uncover the mesiodens, wait for eruption and then extract it.
- C. extract the mesiodens and allow passive eruption of 2.1.
- D. extract the mesiodens and orthodontically extrude 2.1.

A 7 year old has just lost a permanent maxillary central incisor due to trauma. The tooth cannot be found. The most appropriate immediate management is to

- A. order a soft tissue x-ray.
- B. test adjacent teeth for vitality.
- C. maintain space with a removable appliance.
- D. prescribe an antibiotic.

An 8 year old patient has a permanent central incisor with a necrotic pulp and a wide open apex. The most appropriate management is to perform a/an

- A. pulpotomy.
- B. apexification.
- C. regeneration.
- D. root canal therapy.

A 1.5mm diameter carious pulp exposure occurs on a permanent first molar of a 7 year old child. The tooth is vital and has no periapical involvement. The most appropriate initial treatment is to perform a/an

- A. pulp capping.
- B. partial pulpotomy
- C. pulpotomy.
- D. pulpectomy.
- E. extraction.

A 9 year old presents for treatment immediately following a facial injury resulting in a fracture of a maxillary central incisor that involves the enamel only. The tooth tests negative to an electric pulp tester. This finding indicates that the tooth

- A. is nonvital and should be extracted.
- B. is nonvital and endodontic therapy is indicated.
- C. has a root fracture and should be extracted.
- D. should be observed and tested again at a later date.

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Which of the following conditions is an example of a mucous retention phenomenon?

- A. Nicotine stomatitis.
- B. Koplik's spots.
- C. Ranula.
- D. Residual cyst.
- E. Nasopalatine cyst.

Developing roots will split when the

- A. epithelial diaphragm forms too many lateromedial extensions.
- B. dental follicle cells migrate into the epithelial diaphragm.
- C. cementoblasts fail to develop on and stabilize the root's surface.
- D. periodontal ligament forms too soon.

The upper lip is the result of fusion between the

- A. maxillary and mandibular processes.
- B. maxillary and lateral nasal processes.
- C. maxillary and medial nasal processes.
- D. medial and lateral nasal processes.
- E. lateral and medial palatine processes.

Cleft lip is caused by the failure of which of the following processes to fuse?

- A. Maxillary.
- B. Maxillary and lateral nasal.
- C. Palatine.

The normal growing mandible exhibits which of the following characteristics?

- A. Resorbs along the posterior rami.
- B. Grows more vertically than horizontally.
- C. Has completed 100% of its growth by age 13 in females.
- D. Has latent post-pubertal growth potential.

The principal growth sites of the maxilla in a downward and forward direction include which of the following sutures?

1. Frontomaxillary.
2. Zygomaticomaxillary.
3. Pterygopalatine.
4. Median palatine.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

In the mandible, the main growth site is in the

- A. gonial angle.
- B. condylar cartilage.
- C. posterior border of the ramus.
- D. inferior and lateral aspects of the body of the mandible.

An overjet of 8mm is usually associated with

- A. Angle Class I cuspid relationship.
- B. Angle Class II cuspid relationship.
- C. Angle Class III cuspid relationship.
- D. Angle Class I molar relationship.

What is the earliest age to confirm the diagnosis of a congenitally missing mandibular second premolar?

- A. 1 year.
- B. 3 years.
- C. 5 years.
- D. 7 years.

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Which of the following represents the normal relationship of the primary canines?

- A. The distal inclined plane of the maxillary canine articulates with the mesial inclined plane of the mandibular canine.
- B. The mesial inclined plane of the maxillary canine articulates with the distal inclined plane of the mandibular canine.
- C. Normal articulation of primary canines is end-to-end.

Orthopedic correction of a mild skeletal Angle Class III malocclusion should be started

- A. just prior to the pre-pubertal growth spurt.
- B. immediately following the pre-pubertal growth spurt.
- C. shortly after eruption of the upper first permanent molars.
- D. shortly after eruption of the upper second permanent molars.

Correction of a lingual crossbite of tooth 1.2 has the best long term prognosis if 1.2 is

- A. lingually inclined, with 50% overbite.
- B. ideally inclined, with 50% overbite.
- C. lingually inclined, with 5% overbite.
- D. ideally inclined, with 5% overbite.

Serial extraction

- A. involves the 4 permanent first premolars.
- B. is the treatment for Class II skeletal malocclusions with severe space shortage.
- C. is commenced with bilateral expansion of the arches.
- D. is best suited to Class I dental and skeletal malocclusions with minimal space shortage.
- E. requires leeway space maintenance.

In an Angle Class I occlusion the

- A. distal inclined plane of the maxillary canine articulates with the mesial inclined plane of the mandibular canine.
- B. mesial inclined plane of the maxillary canine articulates with the distal inclined plane of the mandibular canine.
- C. the primary canines are end-to-end.
- D. the permanent canines are end-to-end.

Which of the following would differentiate clinically between an acute apical abscess (acute periradicular abscess) and an acute periodontal abscess on a single rooted tooth?

- A. Pain upon palpation.
- B. Tooth mobility.
- C. Pain upon percussion.
- D. Pulp vitality testing.

A 16 year old healthy patient has good oral hygiene with minimal plaque and calculus, but severe interproximal attachment loss affecting the first molars and incisors. The most likely diagnosis is

- A. localized aggressive periodontitis.
- B. localized chronic periodontitis.
- C. generalized aggressive periodontitis.
- D. generalized chronic periodontitis.

During orthodontic treatment, a healthy adolescent will most frequently present with

- A. gingivitis.
- B. horizontal bone loss.
- C. necrotizing ulcerative gingivitis.
- D. vertical bone loss.

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Which of the following is NOT a sign of occlusal trauma?

- A. Fremitus.
- B. Gingival recession.
- C. Widened periodontal ligament.
- D. Tooth migration.

Which of the following is NOT a risk factor for periodontitis?

- A. Smoking tobacco.
- B. Poorly controlled diabetes.
- C. Coronary heart disease.
- D. Poor oral hygiene.

Subgingival calculus

- A. accumulates predominantly on mandibular incisors and maxillary molars.
- B. derives its dark colour from food and drinks.
- C. is the cause of periodontitis.
- D. is mineralized subgingival plaque.

The principal microorganism in localized aggressive periodontitis is

- A. Porphyromonas gingivalis.
- B. Fusobacterium nucleatum.
- C. Aggregatobacter (Actinobacillus) actinomycetemcomitans.
- D. Prevotella intermedia.

Clinical diagnosis of periodontitis requires the presence of

- A. bleeding upon probing.
- B. loss of periodontal attachment.
- C. a periodontal pocket.
- D. tooth mobility.

Periodontitis

- 1. develops from gingivitis.
- 2. goes through stages of tissue destruction and quiescence.
- 3. is associated with bone loss.
- 4. is caused by occlusal trauma.

The periodontal condition showing localized advanced vertical bone loss involving the first molars and the incisors is diagnosed as

- A. necrotizing ulcerative periodontitis.
- B. aggressive localized periodontitis.
- C. chronic localized periodontitis.
- D. periodontitis as a manifestation of a systemic disease.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Diagnosis of periodontitis is clinically demonstrated by

- A. bleeding from the base of the periodontal pocket.
- B. loss of periodontal attachment.
- C. pain upon probing.

The predominant micro-organisms associated with periodontitis are

- A. Gram-positive aerobes.
- B. Gram-negative aerobes.
- C. Gram-positive anaerobes.
- D. Gram-negative anaerobes.

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Which of the following is LEAST likely to influence the development of plaque induced gingivitis?

- A. Pregnancy.
- B. Diabetes.
- C. Traumatic occlusion.
- D. Dental plaque.
- E. Calculus.

Which of the following changes in colour, contour and texture are indicative of plaque induced gingivitis?

- A. Red, swollen, increased stippling.
- B. Cyanotic, cleft formation, lack of stippling.
- C. Red, swollen, lack of stippling.
- D. Pink, swollen, lack of stippling.

Gingival bleeding associated with plaque induced gingivitis is due to

- A. a vitamin C deficiency.
- B. destruction of vessels of the periodontal ligament.
- C. excessive pocket depth.
- D. microulceration of sulcus epithelium.

Severe chronic periodontitis is defined by

- A. attachment loss greater than 5mm.
- B. periodontal pockets greater than 5mm.
- C. presence of purulent exudate.
- D. presence of a Class I furcation involvement.

The most common complaint of a patient with gingivitis is

- A. bleeding on brushing.
- B. painful gums.
- C. changes in the texture of the gingiva.
- D. bad breath.

Which of the following is contagious?

- A. Pemphigus.
- B. Primary herpetic gingivostomatitis.
- C. Recurrent aphthous stomatitis.
- D. Necrotizing ulcerative gingivitis.

Which of the following is an etiologic factor in the development of necrotizing ulcerative gingivitis?

- A. Gluten intolerance.
- B. Acute stress.
- C. Lack of attached gingiva.
- D. Gingival trauma.

Which of the following conditions has the POOREST prognosis?

- A. Gingival tissue with edematous red interdental papillae.
- B. Gingival tissue with 1mm pocket labial to a mandibular incisor.
- C. Firm gingival tissue with generalized 5 and 6mm pockets.
- D. Class II furcation involvement in maxillary molars.

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Which type of periodontitis is generally treated WITHOUT systemic antibiotics?

- A. Localized severe aggressive periodontitis in a 16 year old patient.
- B. Localized severe aggressive periodontitis in a 25 year old patient.
- C. Severe refractory chronic periodontitis.
- D. Severe generalized chronic periodontitis.
- E. Generalized severe aggressive periodontitis in a 30 year old patient.

Which of the following conditions has the WORST prognosis for a furcation involved tooth?

- A. Wide root separation.
- B. Narrow root separation.
- C. A bifurcation ridge.
- D. A cemento-enamel projection.

Resective osseous surgery is best suited for periodontal sites with

- A. severe attachment loss.
- B. severe intrabony defects.
- C. teeth with short roots.
- D. early to moderate bone loss.

The prognosis for a replanted developed permanent tooth is most influenced by the

- A. length of time the tooth has been out of the mouth.
- B. use of an antibiotic.
- C. effectiveness of the irrigation of the socket.
- D. rigidity of the splint applied.
- E. thoroughness of the curettage of the root surface.

Maintenance care for a patient treated for periodontal disease includes periodic assessment of

- 1. tooth mobility.
- 2. probing depth.
- 3. gingival inflammation.
- 4. oral hygiene status.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

After periodontal surgery, sensitivity to thermal change is reduced by

- 1. replanning the roots.
- 2. keeping the roots free of bacterial plaque.
- 3. adjusting the occlusion.
- 4. desensitizing the roots with an appropriate medicament.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Root planing is used in the treatment of pockets which are

- 1. edematous.
- 2. fibrotic.
- 3. below the mucogingival junction.
- 4. infrabony.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Gingivectomy is indicated for

1. pseudopockets.
  2. suprabony pockets.
  3. fibrotic gingival enlargements.
  4. infrabony pockets.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A surgical flap approach to periodontal pocket elimination permits

- A. healing by primary intention.
- B. retention of gingiva.
- C. access to perform osseous recontouring.
- D. All of the above.

The gingivectomy approach to pocket elimination results in

- A. healing by primary intention.
- B. adequate access to correct irregular osseous contours.
- C. retention of all or most of the attached gingiva.
- D. None of the above.

Following root planing, reduction in pocket depth is due to

- A. shrinkage of the gingival tissue.
- B. epithelial attachment.
- C. connective tissue attachment.
- D. All of the above.

Subgingival calculus

- A. does not have a definite predilection for a specific site or sites.
- B. derives from subgingival plaque.
- C. may take longer to form compared to supragingival calculus.
- D. All of the above.

In periodontal flap surgery, the initial incision is made to

- A. remove the sulcular lining of the pocket.
- B. aid in healing.
- C. sever the attachment of the oblique fibres of the periodontal ligament.
- D. excise the keratinized gingiva.

Which of the following periodontal procedures is indicated on a maxillary canine that will receive a full crown with subgingival margins when the abutment has 1mm of attached gingiva, no sign of inflammation or loss of attachment?

- A. Root planing.
- B. Coronally positioned flap.
- C. Localized gingivectomy.
- D. Autogenous connective tissue graft.
- E. There is no indication that this tooth requires periodontal treatment.

The objective of root planing during periodontal therapy is to remove

- A. plaque, calculus, contaminated cementum and junctional epithelium.
- B. plaque and calculus exclusively.
- C. plaque, calculus and crevicular epithelium.
- D. plaque, calculus and contaminated cementum.
- E. all cementum associated with periodontitis.

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Which of the following root surfaces have concavities that make root planing difficult?

- A. Mesial of maxillary first premolars.
- B. Lingual of mandibular first premolars.
- C. Mesial of maxillary incisors.
- D. Distal of the palatal roots of maxillary molars.

The primary objective of periodontal flap surgery in the treatment of periodontitis is to

- A. remove granulation tissue.
- B. provide access for periodontal debridement.
- C. add bone support.
- D. correct gingival architecture.

Most bone loss following the placement of dental implants occurs at

- A. 0 – 1 year.
- B. 2 – 4 years.
- C. 5 – 7 years.
- D. 10 – 12 years.

A daily chlorhexidine rinse following periodontal flap surgery is primarily used to

- A. enhance regeneration.
- B. encourage wound healing.
- C. facilitate plaque control.
- D. create new attachment.

A patient presents with 5mm of gingival recession on the labial of tooth 1.3. The most predictable surgical procedure to achieve root coverage on this tooth is a

- A. free autogenous gingival graft.
- B. subepithelial connective tissue graft.
- C. laterally positioned flap.
- D. double papilla pedicle graft.

The most reliable measurement of the effectiveness of root planing at re-evaluation 4-6 weeks later is

- A. root smoothness.
- B. absence of plaque.
- C. absence of bleeding upon probing.
- D. increased sulcular fluid flow.

Regular use of oral irrigators will

- A. prevent plaque formation.
- B. remove plaque.
- C. remove calculus.
- D. remove debris.
- E. prevent bacteremia.

Pathologic migration of teeth is a clinical feature of

- A. disuse atrophy.
- B. necrotizing ulcerative gingivitis.
- C. plaque-induced gingivitis.
- D. generalized chronic periodontitis.

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Disuse atrophy of the periodontium causes

- A. changes in the arrangement of fibre bundles.
- B. narrowing of the periodontal ligament.
- C. osteoporosis of the alveolar process.
- D. decrease in tooth mobility.
- E. All of the above.

Aggressive periodontitis has all of the following features EXCEPT

- A. rapid attachment loss.
- B. specific periodontal microbial pathogens.
- C. radiographic evidence of bone loss.
- D. ulcerations of the gingiva.

Nystatin is the most appropriate drug to treat

- A. aphthous stomatitis.
- B. candidiasis.
- C. periradicular abscess.
- D. necrotizing ulcerative gingivitis.

Exfoliative cytology is indicated in the diagnosis of

- A. lichen planus.
- B. aphthous ulceration.
- C. herpes simplex.
- D. benign mucous membrane pemphigoid.
- E. erythema multiforme.

The most appropriate method to diagnose a cystic tumour is to

- A. examine the fluid under a microscope.
- B. submit the tissue for histological analysis.
- C. perform a cytologic smear.
- D. culture the fluid.
- E. order blood tests.

Keratocystic odontogenic tumours (odontogenic keratocysts) have a/an

- A. inflammatory origin.
- B. mixed radiopaque/radiolucent appearance.
- C. solid consistency.
- D. tendency to recur.

A 58 year old woman complains of electric shock-like pain on the left side of the chin and lip when eating or taking a hot shower. Which of the following medications is most appropriate to confirm the diagnosis?

- A. Amoxicillin.
- B. Carbamazepine.
- C. Acetaminophen and codeine.
- D. Ibuprofen.

Which of the following is/are associated with an impacted tooth?

1. Odontogenic adenomatoid tumour.
2. Periapical osseous dysplasia (periapical cemento-osseous dysplasia).
3. Calcifying epithelial odontogenic tumour.
4. Cementoblastoma.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Osteomyelitis of the mandible may follow

1. radiotherapy.
  2. dentoalveolar abscess.
  3. fracture.
  4. Vincent's angina.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Oral lesions can be found in all of the following conditions EXCEPT for

- A. leukemia.
- B. pernicious anemia.
- C. infectious mononucleosis.
- D. obstructive jaundice.

An odour of acetone on the breath can be found in patients with

- A. bronchiectasis.
- B. rhinitis.
- C. salicylate poisoning.
- D. diabetes mellitus.

Hemangiomas of the jaws

- A. never occur in bone.
- B. are malignant.
- C. can appear cystic radiographically.
- D. are metastatic lesions.

Leukemic gingivitis has a similar clinical appearance to

- A. ascorbic acid deficiency gingivitis.
- B. infectious mononucleosis.
- C. thrombocytopenic purpura.
- D. necrotizing ulcerative periodontitis.

The most likely diagnosis of a proliferative lesion found at a denture periphery is a/an

- A. epulis granulomatosum.
- B. epulis fissuratum.
- C. giant cell granuloma.
- D. squamous cell carcinoma.

Which of the following is/are associated with xerostomia?

1. Atropine administration.
  2. Acute anxiety state.
  3. Mikulicz's disease.
  4. Sjögren syndrome.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following conditions is/are associated with AIDS?

1. Acute marginal periodontitis.
  2. Hairy leukoplakia.
  3. Candidiasis.
  4. Geographic tongue.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The most common site of intraoral squamous cell carcinoma is the

- A. palate.
- B. floor of the mouth.
- C. gingiva.
- D. buccal mucosa.

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An 80 year old man develops multiple painful skin vesicles along the distribution of the right infraorbital nerve. The most likely diagnosis is

- A. psoriasis.
- B. herpes zoster.
- C. pemphigus vulgaris.
- D. candidiasis.

Which of the following is NOT a true cyst?

- 1. Keratocystic odontogenic tumour (odontogenic keratocyst).
  - 2. Traumatic bone cyst.
  - 3. Radicular cyst.
  - 4. Lateral periodontal cyst.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A pleomorphic adenoma is characterized by

- A. metastases.
- B. recurrence.
- C. pain.
- D. ulceration.

The characteristic oral lesion(s) of pemphigus is/are

- A. vesicles and bullae.
- B. Fordyce granules.
- C. white plaques.
- D. hairy tongue.
- E. candidiasis.

Which of the following conditions may result from horizontally brushing the teeth?

- A. Erosion.
- B. Abrasion.
- C. Attrition.
- D. Hypoplasia.

The most appropriate management of a painless ulcer of 2 months duration affecting the lateral border of the tongue is to

- A. prescribe systemic antibiotics.
- B. perform an incisional biopsy.
- C. re-evaluate in 6 months.
- D. obtain a complete blood count.
- E. obtain a cytologic smear.

In the treatment of necrotizing ulcerative gingivitis with associated lymphadenopathy, which of the following medications is the most appropriate?

- A. An anti-inflammatory.
- B. A topical antibiotic.
- C. A systemic antibiotic.
- D. An analgesic.

The most appropriate treatment of an ameloblastoma is

- A. chemotherapy.
- B. enucleation.
- C. resection.
- D. radiotherapy.

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Management of a patient with an acute periradicular abscess should include

1. elimination of the cause.
2. drainage.
3. supportive therapy.
4. external hot compresses.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A patient dislocates his mandible for the first time. After reduction, the most appropriate management is to

- A. inject the joint with hydrocortisone.
- B. inject the joint with a sclerosing solution.
- C. have the patient exercise the mandible to avoid trismus.
- D. immobilize for ten days.

Displacement of fractures is influenced by

- A. age.
- B. hemorrhage.
- C. edentulism.
- D. muscle attachments.

Which of the following is a CONTRAINDICATION for a single tooth extraction in a general dental office?

- A. The patient is severely hyperthyroid and not under treatment.
- B. The patient is a well-controlled diabetic.
- C. The tooth is seated in a pneumatized maxillary sinus.
- D. The tooth has internal root resorption.

Which impacted mandibular third molar is usually easiest to remove?

- A. Mesio-angular.
- B. Horizontal.
- C. Disto-angular.
- D. Inverted.

With respect to extraction of teeth, forceps beaks should?

- A. allow for a 180° rotation.
- B. be applied parallel to the long axis of the tooth.
- C. be pulled coronally during extraction.
- D. be placed on the crown of the tooth.

Which of the following is a basic design principle for a mucoperiosteal flap?

- A. Narrow based.
- B. Limited bone exposure.
- C. Able to be repositioned over bone.
- D. Mesial release incision.

Marsupialization is the most appropriate surgical technique in the management of

- A. hygroma.
- B. cystic ameloblastoma.
- C. ranula.
- D. osteomyelitis.

Management of a “dry socket” should include

- A. saline irrigation of socket.
- B. vigorous curettage of the socket.
- C. placement of topical antibiotics in the socket.
- D. a prescription for systemic antibiotics.

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The most appropriate antibiotic for a periapical dental abscess is

- A. pen V.
- B. cephalosporin.
- C. erythromycin.
- D. metronidazole.
- E. ampicillin.

A healthy 66 year old patient who had a myocardial infarct eight years previously requires an extraction. The most appropriate management is to

- A. admit the patient to hospital for extraction with local anesthesia.
- B. admit the patient to hospital for extraction with general anesthesia.
- C. extract the tooth in the office using preoperative sedation and local anesthesia without a vasoconstrictor.
- D. extract the tooth in the office using local anesthesia with a vasoconstrictor.

Dentigerous cysts should be completely enucleated because

- A. the epithelium of the cyst can degenerate and form neoplastic cells.
- B. the epithelial lining of the cyst has a high recurrence potential.
- C. the connective tissue of the cyst wall can become osteoblastic.
- D. continued growth is likely to result in a supernumerary tooth.

An incipient carious lesion is described as being in

- A. dentin without pulpal involvement.
- B. the cementum only.
- C. the enamel and in the dentin up to 1mm.
- D. the enamel only.

A patient reports pain on mastication since the placement of a metal-ceramic crown 2 weeks earlier. The most likely cause is

- A. hyperemia.
- B. supraocclusion.
- C. dentin hypersensitivity.
- D. acute pulpitis.

A 19 year old female with an otherwise healthy dentition presents with erosion of the lingual surfaces of all maxillary anterior teeth. This is most likely caused by

- A. xerostomia.
- B. occlusal parafunction.
- C. diet high in citrus fruit.
- D. bulimia.

Which of the following factors influence(s) the development of root caries?

1. A diet high in refined carbohydrates.
  2. Periodontal disease.
  3. The anatomy of the cemento-enamel junction.
  4. Xerostomia.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A vertical cross-section of a smooth surface carious lesion in enamel appears as a triangle with the

- A. base at the dentino-enamel junction.
- B. base facing toward the pulp.
- C. apex pointing to the enamel surface.
- D. apex pointing to the dentino-enamel junction.

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Sensitivity related to a noncarious cervical lesion is most likely explained by the

- A. thermal conductivity of dentin.
- B. hydrodynamic theory.
- C. dentinogenesis process.
- D. neurogate mechanism.
- E. inorganic component of dentin.

A patient complains of tooth pain which is sharp and stabbing when chewing sweet or cold foods. Pain is relieved by warmth and direct pressure. The most likely diagnosis is

- A. a carious lesion with pulpal inflammation.
- B. a carious lesion with pulp degeneration.
- C. traumatic occlusion.
- D. a cracked tooth.

A 16 year old patient has multiple extensive carious lesions. The most appropriate management is to place the patient on a preventive regime and to

- A. place amalgam restorations over the next few months.
- B. excavate caries and place temporary restorations within the next few weeks.
- C. delay any treatment until the hygiene improves.
- D. restore all teeth with composite resin over the next few months.

During cavity preparation with a rubber dam, a small mechanical pulp exposure occurs. The most appropriate management is to

- A. swab the exposure with chlorhexidine.
- B. place a pulp capping material.
- C. perform a pulpotomy.
- D. perform a pulpectomy.

When performing a functional analysis of occlusion, the mandible may be observed to exhibit a shift from centric relation to centric occlusion in all but one of the following directions

- A. forward.
- B. backward.
- C. upward.
- D. lateral.

Which of the following clinical findings will give the most favourable prognosis for successful direct pulp capping?

- 1. No hemorrhage at the exposure site.
  - 2. The exposure is small.
  - 3. The tooth is hypersensitive to heat.
  - 4. The exposure site is uncontaminated.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

If a patient in her first trimester of pregnancy requires the replacement of a large MOD amalgam restoration with extensive recurrent caries and thermal sensitivity, the most appropriate treatment is to

- A. delay treatment until after the baby is born.
- B. restore with reinforced zinc oxide eugenol.
- C. restore with amalgam.
- D. restore with a composite resin.

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A 45 year old patient has 32 unrestored teeth. The only defects are deeply stained grooves in the posterior teeth. Clinical examination reveals no evidence of caries in the grooves. The most appropriate management is

- A. application of a resin based pit and fissure sealants.
- B. application of a glass ionomer pit and fissure sealants.
- C. conservative Class I amalgams.
- D. prophylactic odontotomy.
- E. no treatment.

The most appropriate treatment for a permanent molar with occlusal caries confined to the enamel of the central pit is a/an

- A. amalgam.
- B. composite resin.
- C. fluoride varnish application.
- D. preventive resin restoration.

The most significant factor contributing to the long-term success of the restoration of an endodontically treated tooth is the

- A. type of post utilized.
- B. remaining coronal tooth structure.
- C. presence of extracoronary coverage.
- D. type of core material used.

Which of the following is characteristic of periapical osseous dysplasia (periapical cemento-osseous dysplasia)?

- A. Pain.
- B. Expansion.
- C. Biopsy is not necessary.
- D. Requires endodontics or extraction.

A periapical granuloma is all of the following EXCEPT

- A. radiolucent.
- B. painless.
- C. neoplastic.
- D. inflammatory.

Radiographic examination of a healthy 38 year old patient shows a 4mm diameter, well-defined radiolucency at the apex of tooth 4.1. The tooth has a normal response to vitality tests. The most appropriate management is

- A. incision and drainage.
- B. endodontic treatment.
- C. observation.
- D. apicoectomy.
- E. to open the tooth for drainage.

The most common clinical finding in the diagnosis of an acute apical abscess is

- A. mobility of the tooth.
- B. pain on percussion.
- C. discoloration of the crown.
- D. presence of a cellulitis.
- E. lymph node enlargement.

A healthy, 23 year old patient experiences a warm sensation, diaphoresis, nausea, light headedness and then loses consciousness approximately 30 seconds following the injection of 1.8ml of 2% lidocaine with 1:100,000 epinephrine for an inferior alveolar nerve block. What is the most likely diagnosis for his situation?

- A. Allergic reaction.
- B. Overdose of local anesthetic.
- C. Syncope.
- D. Intravascular injection.

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Shortly after the administration of an inferior alveolar nerve block, a healthy adult patient rapidly develops a facial rash. Which of the following signs and symptoms should be watched for before initiating the planned dental treatment?

1. Pallor and perspiration.
2. Shortness of breath.
3. Hyperventilation.
4. Edema of the lips.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Tetracyclines have all of the following properties EXCEPT

- A. absorption is impaired when taken with milk.
- B. they predispose patients to candidial infection.
- C. they form stable complex with the developing tooth matrix.
- D. they may be substituted for amoxicillin in patients that require coverage to prevent subacute bacterial endocarditis.

Tetracycline therapy instituted either in the second trimester or post partum in the infant is responsible for

- A. minor changes in the hydroxyapatite of the enamel.
- B. discolouration of deciduous teeth.
- C. discolouration of permanent teeth.
- D. discolouration of the deciduous or permanent teeth.

A patient has a history of shortness of breath and ankle edema. You would suspect

- A. asthma.
- B. emphysema.
- C. rhinophyma.
- D. cardiac insufficiency.

Flurbiprofen is an

- A. antibiotic.
- B. muscular relaxant.
- C. anti-inflammatory.
- D. antidepressant.

A very apprehensive patient experiencing pain may be prescribed a barbiturate, chloral hydrate or an antihistamine to control the anxiety. In which of the following would you expect an exaggerated response to the use of these drugs? A/An

- A. diabetic.
- B. arthritic patient.
- C. patient with chronic renal disease.

In the treatment of necrotizing ulcerative gingivitis with associated lymphadenopathy, which of the following medications is the most appropriate?

- A. An anti-inflammatory.
- B. A topical antibiotic.
- C. A systemic antibiotic.
- D. An analgesic.

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Which is the most appropriate prophylactic antibiotic for a patient with mitral valve prolapse with regurgitation undergoing a surgical dental procedure?

- A. Clindamycin.
- B. Vancomycin.
- C. Erythromycin.
- D. Amoxicillin.
- E. None of the above.

Which of the following procedures requires antibiotic prophylaxis for a patient with a prosthetic heart valve?

- A. Inferior alveolar nerve block.
- B. Postoperative suture removal.
- C. Restoration of occlusal caries.
- D. Making an alginate impression.

Nystatin is the most appropriate drug to treat

- A. aphthous stomatitis.
- B. candidiasis.
- C. periodontal abscess.
- D. necrotizing ulcerative gingivitis.

Appropriate management for the relief of symptoms of primary herpetic gingivostomatitis in an immunocompromised patient may include

- A. penicillin V.
- B. triamcinolone acetonide in Orabase®.
- C. acyclovir capsules.
- D. dexamethasone elixir.

In a patient who is allergic to penicillin, the most appropriate antibiotic to treat an infection of endodontic origin is

- A. amoxicillin.
- B. azithromycin.
- C. clindamycin.
- D. tetracycline.

Which of the following drugs will have the most rapid onset of action?

- A. Oral ibuprofen.
- B. Intramuscular penicillin.
- C. Subcutaneous epinephrine.
- D. Inhaled nitrous oxide.

Oral nitrate is used to treat the symptoms of

- A. hypertension.
- B. angina.
- C. arrhythmia.
- D. tachycardia.

Which of the following require prophylactic antibiotics prior to dental procedures causing a bacteremia?

- A. Implanted cardiac pacemakers.
- B. Prosthetic cardiac valves.
- C. Coronary artery bypass grafts.
- D. Cardiac stents one year after placement.

Which of the following medications is CONTRAINDICATED in the management of a patient who is taking warfarin?

- A. Acetaminophen.
- B. Acetylsalicylic acid.
- C. Codeine.
- D. Clindamycin.

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Generalized malaise and elevated body temperature may be associated with

- A. asymptomatic apical periodontitis.
- B. acute apical abscess.
- C. symptomatic irreversible pulpitis.
- D. asymptomatic irreversible pulpitis.

Initial treatment of necrotizing ulcerative gingivitis includes

- 1. debridement.
- 2. occlusal adjustment.
- 3. oral hygiene instruction.
- 4. gingivoplasty.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Treatment of primary herpetic gingivostomatitis should include

- 1. steroid therapy.
- 2. palliative treatment.
- 3. application of dilute hydrogen peroxide.
- 4. control of secondary infection.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The purpose of a periodontal dressing is to

- A. enhance wound healing.
- B. protect the wound from injury.
- C. increase patient comfort.
- D. All of the above.

The most appropriate treatment of necrotizing ulcerative gingivitis in a patient with lymphadenopathy is

- 1. periodontal debridement.
- 2. occlusal adjustment.
- 3. oral hygiene instruction.
- 4. antibiotic therapy.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The immediate treatment of a periodontal abscess is to

- A. establish drainage.
- B. prescribe an analgesic.
- C. relieve the occlusion.
- D. prescribe an antibiotic.

Retention of an inlay is improved by

- 1. addition of an occlusal dovetail.
- 2. increasing the parallelism of walls.
- 3. lengthening the axial walls.
- 4. placing a gingival bevel.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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During post preparation on a maxillary central incisor, the labial surface of the root is perforated. The most appropriate management is to

- A. extract the tooth.
- B. cement the post using a resin-based cement.
- C. cement the post, then raise a flap and seal the defect surgically.
- D. re-prepare the canal so the post is now totally within the canal and cement the post.

Elective endodontic treatment may be safely and successfully undertaken for all of the following EXCEPT

- A. hemophiliacs.
- B. patients with a history of rheumatic fever.
- C. pregnant patients during first trimester.
- D. pregnant patients during second trimester.

When removal of carious dentin results in an exposure of nonvital pulp, the most appropriate management is to

- A. cap the exposed pulp horn with calcium hydroxide.
- B. occlude the cavity with a light packing of cotton moistened with eugenol.
- C. place a temporary restoration and observe.
- D. perform endodontic treatment.

The prognosis for an avulsed tooth is mainly affected by

- A. storage solution.
- B. length of extraoral time.
- C. necrotic cementum removal.
- D. pulp extirpation.

A patient's 4 mandibular incisors were traumatized 3 years ago in an accident. Radiographs now show apical radiolucencies associated with all 4 teeth. The most appropriate management is to

- A. test the pulp vitality and perform root canal therapy on teeth with no response.
- B. perform root canal therapy on all 4 teeth and curette the periapical area.
- C. extract the teeth and place a bonded bridge.
- D. postpone treatment and recheck status periodically.

The most appropriate emergency management of a mature permanent tooth with acute irreversible pulpitis is

- A. pulpotomy.
- B. pulpectomy.
- C. incision and drainage.
- D. trephination.
- E. apical surgery.

The anterior palatine foramen is most likely to be radiographically misdiagnosed as a

- A. rarefying osteitis.
- B. nasolabial cyst.
- C. cyst of the incisive papilla.

The mechanical objectives when preparing the root canal system for obturation with gutta-percha should include

- A. development of a continuously tapering cone in the root canal.
- B. removal of irregularities.
- C. maintenance of an intact foramen.
- D. all of the above.

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When performing endodontic treatment on a vital tooth, the most appropriate termination point of apical root canal preparation is

- A. 0.5 to 1mm short of the radiographic apex.
- B. 3mm short of the radiographic apex.
- C. slightly through the apical foramen.
- D. to the point where the patient feels sensation.

Which one of the following is the most appropriate initial treatment for internal resorption?

- A. Pulpectomy.
- B. Pulpotomy.
- C. Pulp capping.
- D. Apicoectomy.

During endodontic treatment a file separates. The fragment is 3mm long and is lodged tightly in the apical third of the canal. No radiographic changes at the apex are evident. In addition to informing the patient, the most appropriate management is to

- A. extract the tooth.
- B. perform an apicoectomy and place a retrograde filling.
- C. resect the apical section of the root containing the separated instrument.
- D. complete the root canal filling and monitor at recall examination.

Which of the following may be used to disinfect gutta-percha points?

- A. Autoclave.
- B. Chemical solutions.
- C. Flame sterilization.
- D. Dry heat sterilization.

Metronidazole can be used to treat

- A. denture stomatitis.
- B. recurrent aphthous ulcers.
- C. necrotizing ulcerative gingivitis (NUG).
- D. primary herpetic gingivostomatitis.

Which of the following is the most appropriate for pain management following an emergency pulpectomy for an adult with a history of severe asthma and nasal polyps?

- A. Naproxen.
- B. Acetylsalicylic acid.
- C. Ketorolac.
- D. Acetaminophen.

Which of the following should NOT be prescribed for a patient receiving warfarin?

- A. Acetaminophen.
- B. Metronidazole.
- C. Penicillin.
- D. Codeine.

A patient has suffered a blow resulting in the loosening of 3 maxillary incisors. Vitality tests give negative readings. The most appropriate management is to

- A. perform pulpectomies on the teeth.
- B. remove the teeth, fill the root canals and replant.
- C. splint the teeth, check vitality in one month and if negative, treat endodontically.
- D. splint the teeth and treat endodontically immediately.

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Radiographs of the mandibular incisor teeth of a 45 year old healthy patient reveal periapical radiolucencies. The teeth are vital and asymptomatic. The most appropriate management is to

- A. perform a biopsy of the radiolucent lesion.
- B. perform endodontic therapy on the four incisors.
- C. place a drain in the affected area.
- D. observe periodically.

The most appropriate management for a tooth with a history of previous trauma and internal resorption is

- A. observation over 6 months for further resorption.
- B. complete instrumentation and medication with intracanal calcium hydroxide.
- C. immediate instrumentation and obturation followed by apical curettage.
- D. extraction and replacement with a fixed or removable prosthesis.

Metallic salts are included in root canal sealers to make the sealers

- A. stronger.
- B. radiopaque.
- C. set more rapidly.
- D. bond to dentin.

Maxillary incisor protrusion can be treated by

- 1. premolar extraction with orthodontic retraction of the incisors.
- 2. premolar extraction with surgical repositioning of the anterior dentoalveolar segment.
- 3. extraction of the incisors, alveoloplasty and prosthodontic replacement.
- 4. reduction and genioplasty.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A patient with a pre-existing MOD amalgam restoration has just had endodontic therapy completed on tooth 4.6 but cannot afford a laboratory fabricated final restoration. Interim restorative management of 4.6 with the best prognosis is to

- A. restore with a MOD amalgam.
- B. reduce the occlusal out of occlusion and restore with a MOD amalgam.
- C. cusp cap the buccal and lingual cusps and restore with a MOD amalgam.
- D. restore with a bonded MOD composite resin.

The choice and number of abutments for a fixed partial denture is influenced by the

- 1. length of the span.
- 2. crown-root ratio of the abutments.
- 3. amount of periodontal support of the abutments.
- 4. position of the abutments in the arch.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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During surgical root canal treatment, an apicoectomy of approximately 3mm is recommended because

- A. most accessory and lateral canals will be eliminated.
- B. it will minimally affect the crown to root ratio.
- C. a greater resection may expose a post in the canal.
- D. it will allow better access for retrofill placement.

Treatment options for an immature tooth with a necrotic pulp include

- A. apexogenesis and revascularization.
- B. apexogenesis and conventional nonsurgical root canal treatment.
- C. apexification and conventional nonsurgical root canal treatment.
- D. apexification and revascularization.

Which local anesthetic is subject to inactivation by plasma esterases?

- A. Procaine.
- B. Lidocaine.
- C. Prilocaine.
- D. Mepivacaine.
- E. Bupivacaine.

Which one of the following effects is typically observed with a therapeutic dose of acetaminophen?

- A. Gastrointestinal irritation.
- B. Increased bleeding.
- C. Anti-inflammatory action.
- D. Antipyretic action.

Which of the following requires antibiotic prophylaxis for a patient with a prosthetic heart valve?

- A. Inferior alveolar nerve block.
- B. Endodontic instrumentation beyond apex.
- C. Restoration of occlusal caries.
- D. Making an alginate impression.

Which of the following is used in the emergency management of a patient suffering status epilepticus?

- A. Gabapentin.
- B. Diazepam.
- C. Morphine.
- D. Valproic acid.

A patient who is jaundiced because of liver disease has an increased risk of

- A. postextraction bleeding.
- B. cardiac arrest.
- C. anaphylactic shock.
- D. pulmonary embolism.

Which of the following is a sign of an allergic reaction to penicillin?

- A. Hyperventilation.
- B. Nausea.
- C. Oliguria.
- D. Dermatitis.
- E. Constipation.

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Which of the following is LEAST likely to cause pain?

- A. Symptomatic apical periodontitis (acute periradicular periodontitis).
- B. Chronic apical abscess (chronic periradicular abscess).
- C. Symptomatic irreversible pulpitis.
- D. Reversible pulpitis.

Severe throbbing tooth pain which increases when the patient lies down is a symptom of

- A. symptomatic apical periodontitis (acute periradicular periodontitis).
- B. acute apical abscess (acute periradicular abscess).
- C. symptomatic irreversible pulpitis.
- D. chronic apical abscess (chronic periradicular abscess).

Pain upon vertical percussion on the incisal edge of an anterior tooth may indicate the possible presence of

- A. pulp polyp.
- B. reversible pulpitis.
- C. asymptomatic apical periodontitis (chronic periradicular periodontitis).
- D. symptomatic apical periodontitis (acute periradicular periodontitis).

Erratic and inconsistent electric pulp test results can be explained by all of the following EXCEPT

- A. the presence of multiple canals in various stages of pulp pathosis.
- B. failure to isolate and dry the tooth.
- C. tooth mobility.
- D. poor contact between the electrode and the tooth.

Which of the following can be characterized by a narrowing of pulp chambers and root canals?

- A. Aging.
- B. Acute trauma.
- C. Amelogenesis imperfecta.
- D. Taurodontism.

An infected pulp may cause a/an

- A. keratocystic odontogenic tumour (odontogenic keratocyst).
- B. dentigerous cyst.
- C. periapical osseous dysplasia (periapical cemento-osseous dysplasia).
- D. simple bone cyst/traumatic bone cyst.
- E. periradicular cyst.

Sclerosing osteitis/condensing osteitis in the periapical region is indicative of a/an

- A. acute inflammation of the pulp.
- B. pulpal abscess.
- C. chronic inflammation of the pulp.
- D. early apical abscess formation.

Tooth 3.6 had endodontic treatment completed 10 years ago. It is asymptomatic but a periapical radiograph reveals a 5mm radiolucency associated with the distal root apex. The surrounding soft tissues are within normal limits. The most likely diagnosis for tooth 3.6 is a/an

- A. symptomatic apical periodontitis (acute periradicular periodontitis).
- B. acute apical abscess (acute periradicular abscess).
- C. asymptomatic apical periodontitis (chronic periradicular periodontitis).
- D. chronic apical abscess (chronic periradicular abscess).

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A patient presents complaining of spontaneous pain from a tooth. Pain persists following thermal testing by cold. What is the most likely diagnosis?

- A. Reversible pulpitis.
- B. Asymptomatic irreversible pulpitis.
- C. Symptomatic irreversible pulpitis.
- D. Pulp necrosis.

What is the most serious complication of an acute apical abscess (acute periradicular abscess) in the maxilla?

- A. Pericementitis.
- B. Periostitis.
- C. Cavernous sinus thrombosis.
- D. Spontaneous drainage of pus.

A periradicular granuloma

- A. erodes rapidly through bone.
- B. is asymptomatic.
- C. occurs only in young adults.
- D. occurs at the apex of a vital tooth.

Sclerosing osteitis (dense bone island) differs from idiopathic osteosclerosis in that sclerosing osteitis is

- A. expansile.
- B. radiopaque.
- C. painful.
- D. associated with the apex of the tooth.

A retrograde filling during endodontic apical surgery is indicated in all of the following EXCEPT

- A. when the apical foramen cannot be sealed by orthograde endodontics.
- B. when a lateral root perforation needs to be sealed.
- C. when orthograde endodontics is impractical.

Apicoectomy is CONTRAINDICATED when

- A. periodontal disease causes inadequate bony support.
- B. there is a granuloma at the apex of the tooth.
- C. the cortical plate is more than 4mm thick.
- D. the patient is diabetic.

Which of the following statements is true regarding endodontically treated teeth?

- A. These teeth are more brittle than teeth with vital pulps due to desiccation.
- B. Fracture of these teeth are usually due to loss of coronal tooth structure.
- C. These teeth require full coverage to prevent fracture.
- D. A post provides strength for these teeth.

A patient complains of the discolouration of an upper central incisor. Radiographically, the pulp chamber and the root canal space are obliterated and the periodontal ligament space appears normal. The most appropriate management would be to

- A. perform endodontic treatment and nonvital bleaching.
- B. perform endodontic treatment and fabricate a porcelain veneer.
- C. fabricate a metal-ceramic crown.
- D. fabricate a porcelain veneer.

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Which of the following agents is most effective in cold testing?

- A. Ice water.
- B. Air jet.
- C. Ice stick.
- D. Ethyl chloride.

Which of the following may affect the results of electric pulp testing?

- A. Emotional factors.
- B. Pain threshold.
- C. Analgesics.
- D. Recent trauma.
- E. All of the above.

Which statement is true?

- A. Radiographs can differentiate between a granuloma and a cyst.
- B. A definitive diagnosis of an apical lesion cannot be made using radiography alone.
- C. Periapical radiolucencies are indicative of loss of pulp vitality.
- D. A periapical radiograph can be used to locate the buccal bone level.

Which of the following is consistent with a diagnosis of pulpal necrosis?

- A. Poorly localized spontaneous pain.
- B. Positive response to thermal tests.
- C. Negative response to electric pulp test.
- D. Extreme pain elicited by palpation and percussion tests.

Two weeks following the placement of a restoration, a patient complains of pain to hot and cold in the restored tooth. The most likely diagnosis is

- A. galvanic shock.
- B. reversible pulpitis.
- C. gingival irritation.
- D. cracked tooth syndrome.

Pulp polyp is

- A. an acute pathological lesion.
- B. a proliferative reaction of the pulp.
- C. frequently found in elderly patients.
- D. accompanied by severe pain.

A positive pulp response to the application of cold indicates

- A. pulp necrosis.
- B. an acute apical abscess (acute periradicular abscess).
- C. a chronic apical abscess (chronic periradicular abscess).
- D. a vital tooth.

The electric pulp tester is the most suitable test in cases of teeth with

- A. open apices.
- B. obliterated canals.
- C. full cuspal coverage.
- D. concussion injury.

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Which of the following conditions is most likely to be associated with a sinus tract?

- A. Acute apical abscess (acute periradicular abscess).
- B. Chronic apical abscess (chronic periradicular abscess).
- C. Hypercementosis.
- D. Simple bone cyst/traumatic bone cyst.

Which of the following clinical signs/symptoms is characteristic of symptomatic irreversible pulpitis?

- A. Swelling.
- B. Lingering thermal pain.
- C. Pus formation.
- D. Presence of a sinus tract.

In teeth with pulp necrosis, the periapical area is involved if there is pain

- A. to thermal stimuli.
- B. on percussion.
- C. to electric pulp testing.
- D. when the patient is lying down.

Which of the following statements regarding periapical radiographs is true?

- A. A definitive diagnosis of an apical lesion can be made on a periapical radiograph alone.
- B. The true dimension of the lesion can be predicted from a periapical radiograph.
- C. A definitive diagnosis between granuloma versus cyst can be established from a periapical radiograph.
- D. Pulp diagnosis cannot be made on a periapical radiograph alone.

A positive and prolonged reaction to a heat stimulus indicates that the pulp is

- A. normal.
- B. reversibly inflamed.
- C. irreversibly inflamed.
- D. necrotic.

Which clinical sign might be associated with an acute apical abscess (acute periradicular abscess)?

- A. A positive reaction to the electric pulp tester.
- B. A positive reaction to percussion.
- C. A positive reaction of short duration to cold.
- D. Presence of a sinus tract.

A child has a carious exposure of the pulp in the first primary molar. The cavity is filled with pink tissue which bleeds when punctured by the explorer. What is the pulpal diagnosis?

- A. Normal pulp.
- B. Reversible pulpitis.
- C. Symptomatic irreversible pulpitis.
- D. Asymptomatic irreversible pulpitis.

A patient is in intense pain with a left hemifacial swelling, which is beginning to affect the eye. Examination reveals a fluctuant swelling over tooth 2.2, which has deep caries, and is tender to palpation and percussion. The most likely diagnosis is

- A. symptomatic apical periodontitis (acute periradicular periodontitis).
- B. asymptomatic apical periodontitis (chronic periradicular periodontitis).
- C. acute apical abscess (acute periradicular abscess).
- D. chronic apical abscess (chronic periradicular abscess).

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A patient complains of pain in a mandibular molar when chewing hard foods and drinking cold liquids. Electric pulp tests and radiographic appearance are normal. The pain is most likely caused by

- A. symptomatic apical periodontitis (acute periradicular periodontitis).
- B. asymptomatic apical periodontitis (chronic periradicular periodontitis).
- C. a cracked tooth.
- D. internal resorption.

What is the most likely diagnosis of a tooth presenting spontaneous pain of rapid onset and swelling of associated soft tissues?

- A. Acute apical abscess (acute periradicular abscess).
- B. Chronic apical abscess (chronic periradicular abscess).
- C. Vertical root fracture.
- D. Internal root resorption.

Which of the following signs or symptoms is characteristic of a symptomatic irreversible pulpitis?

- A. Spontaneous pain.
- B. Tenderness to pressure.
- C. Palpation sensitivity.
- D. Non-lingering thermal pain.

A radiograph reveals a radiolucency associated with the apex of tooth 1.5. There is a large restoration but the tooth is asymptomatic and the associated soft tissues appear normal. What is the most likely diagnosis?

- A. Symptomatic apical periodontitis (acute periradicular periodontitis).
- B. Asymptomatic apical periodontitis (chronic periradicular periodontitis).
- C. Acute apical abscess (acute periradicular abscess).
- D. Chronic apical abscess (chronic periradicular abscess).

Which one of the following statements is true as defined in endodontics?

- A. Overfilling refers to the incomplete filling of the canal system with a surplus of material extruding beyond the apical foramen.
- B. Underfilling refers to the complete filling of the canal space, but leaving voids in the pulp chamber for possible recontamination or infection.
- C. Overextension refers to the extrusion of filling material through an accessory canal.
- D. Underextension refers to the vertical extent of the filling material regardless of its completeness of obturation.
- E. All of the above.

Which of the following methods of instrument sterilization uses the lowest temperature?

- A. Steam autoclave.
- B. Dry heat oven.
- C. Ethylene oxide method.
- D. Glass bead sterilizer.
- E. Alcohol autoclave.

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Endodontic therapy is CONTRAINDICATED in teeth with

- A. inadequate periodontal support.
- B. pulp stones.
- C. constricted root canals.
- D. accessory canals.
- E. curved roots.

A patient telephones and tells you he has just knocked out his front tooth but that it is still intact. Your instructions should be to

- A. put the tooth in water and come to your office at the end of the day.
- B. wrap the tooth in tissue and come to your office in a week's time.
- C. put the tooth in alcohol and come to your office immediately.
- D. place tooth under the tongue and come to your office immediately.
- E. place the tooth in milk and come to your office immediately.

For a cast gold restoration, a gingival bevel is used instead of a shoulder because a bevel

- 1. protects the enamel.
  - 2. increases retention.
  - 3. improves marginal adaptation.
  - 4. increases the thickness of gold.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In permanent teeth, two pulp canals are most commonly found in the

- A. distobuccal root of maxillary molars.
- B. distal root of mandibular first molars.
- C. palatal root of maxillary first premolars.
- D. mesial root of mandibular first molars.

The lamina dura is

- A. spongy bone.
- B. cribriform plate.
- C. hypercalcified bone.
- D. compact bone.

Firm contact between approximating teeth is important because it

- A. locates the marginal ridges of each tooth.
- B. keeps the teeth from having any movement during function.
- C. insures proper cusp form and increases masticatory efficiency.
- D. stabilizes the dental arches and gives protection to the gingival papillae.

Which of the following is/are associated with the presence of microorganisms in the bloodstream?

- A. Anachoresis.
- B. Cavernous sinus thrombosis.
- C. Bacteremia.
- D. All of the above.

Which one of the following is the initial treatment for internal resorption?

- A. Pulpectomy.
- B. Pulpotomy.
- C. Pulp capping.
- D. Apicoectomy.

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In restoring occlusal anatomy, the protrusive condylar path inclination has its primary influence on the morphology of

- A. cusp height.
- B. anterior teeth only.
- C. mesial inclines of maxillary cusps and distal inclines of mandibular cusps.
- D. mesial inclines of mandibular cusps and distal inclines of maxillary cusps.

Which of the following statements are true concerning the adult mandible?

1. The mandibular foramen lies in the centre of the mandibular ramus both in the vertical and horizontal planes.
  2. The angle formed by the junction of the ramus and the body of the mandible is an acute one.
  3. The genial tubercles are attachments for the anterior bellies of the digastric muscles.
  4. The temporalis muscle attaches to the lateral surface of the coronoid process.
- A. (1) and (2)
  - B. (1) and (4)
  - C. (1) and (3)
  - D. (1) (3) (4)

A lingual approach for a conservative Class III preparation for a composite resin requires

- A. a retentive internal form.
- B. parallelism of the incisal and gingival walls.
- C. maintenance of the incisal contact area.
- D. All of the above.

Sterilization of carious dentin without pulp injury is assured by the application of

- A. phenol.
- B. 70% ethyl alcohol.
- C. chlorhexidine.
- D. absolute alcohol.
- E. None of the above.

The cell of the dental pulp most capable of transforming into other cells is the

- A. fibroblast.
- B. undifferentiated mesenchymal cell.
- C. odontoblast.
- D. histiocyte.

Severe throbbing tooth pain which increases when the patient lies down is a symptom of

- A. a pulp polyp (chronic hyperplastic pulpitis).
- B. late stage of acute pulpitis (acute suppurative pulpitis).
- C. chronic pulpitis (chronic ulcerative pulpitis).
- D. chronic apical abscess.
- E. pulp hyperemia.

Which of the following microorganisms are most frequently found in infected root canals?

- A. Streptococcus viridans.
- B. Staphylococcus aureus.
- C. Lactobacilli.
- D. Enterococci.
- E. Staphylococcus albus.

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In the mandibular first premolar, the occlusal dovetail of an ideal disto-occlusal amalgam preparation is usually not extended into the mesial fossa because of the

- A. small lingual lobe.
- B. large buccal cusp.
- C. large buccal pulp horn.
- D. prominent transverse ridge.

A protective mechanism of the dental pulp to external irritation or caries is the formation of

- A. pulp stones.
- B. secondary dentin.
- C. secondary cementum.
- D. primary dentin.

The joining together of two teeth in the root portion through cemental union is known as

- A. gemination.
- B. fusion.
- C. twinning.
- D. concrescence.

When odontoblasts are destroyed or undergo degeneration, they are replaced by

- A. ameloblasts.
- B. undifferentiated mesenchymal cells.
- C. multinucleated giant cells.
- D. osteoblasts.

In teeth with complete pulp necrosis, the periapical area is involved if

- 1. there is pain to thermal stimuli.
- 2. there is pain on percussion.
- 3. the tooth throbs when the patient is lying down.
- 4. the radiograph shows an apical radiolucency.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following muscles comprise the retromolar pad?

- 1. Lateral (external) pterygoid.
- 2. Buccinator.
- 3. Palatoglossus.
- 4. Superior constrictor.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The most important principle dictating location and size of access to the root canal system is

- A. preservation of tooth structure.
- B. removal of all caries.
- C. straight line access to the canal.
- D. removal of all pulp horns.

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Special attention is given to matrix adaptation for the insertion of amalgam in a MO cavity in a maxillary first premolar because of the

- A. concavity in the cervical third of the mesial surface of the crown.
- B. restoration being in the esthetic zone.
- C. unusual position of the contact area.
- D. buccolingual width of the tooth's mesial marginal ridge.
- E. size of the interproximal gingival embrasure.

The difference(s) between deciduous and permanent teeth is/are best described by the following statement(s):

- A. The deciduous root trunk is shorter.
- B. The deciduous enamel is thinner and appears whiter.
- C. The deciduous molar roots flare more.
- D. (A) and (C)
- E. All of the above.

Which of the following nerves should be anesthetized for extraction of a maxillary lateral incisor?

- 1. Nasociliary.
  - 2. Nasopalatine.
  - 3. Sphenopalatine.
  - 4. Anterior superior alveolar.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Hyperkeratosis, acanthosis, dysplasia, increased mitosis, intact basal cell layer and chronic inflammatory cells are histologic features that may be found in

- A. squamous cell carcinoma.
- B. carcinoma in situ.
- C. papillofibroma.
- D. endothelioma.

Secondary dentin formation may be stimulated by

- A. pulp necrosis.
- B. fluorosis.
- C. attrition.
- D. vitamin D therapy.

An excisional biopsy of a nodule 5mm in diameter on the lateral border of the tongue was diagnosed as a fibroma. This patient should have

- A. hemisection of the tongue.
- B. radiotherapy to site of biopsy.
- C. no additional therapy.
- D. re-excision with wider margins.
- E. radium implantation around biopsy site.

The greatest single factor in reducing radiation exposure in dentistry is

- A. higher kVp.
- B. proper filtration.
- C. high speed film.
- D. collimation of the X-ray beam.

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Hypercementosis (cemental hyperplasia)

- A. is most often confined to the apical half of the root.
- B. most frequently affects molars.
- C. affects non vital teeth in the majority of cases.
- D. (A) and (C)
- E. (B) and (C)

An anemia in which the red blood cells are smaller and less intense in color than normal is called a

- A. microcytic hypochromic anemia.
- B. microcytic hyperchromic anemia.
- C. macrocytic hypochromic anemia.
- D. macrocytic hyperchromic anemia.
- E. None of the above.

A decrease of which of the following is indicative of hypoparathyroidism?

- A. Serum phosphorus.
- B. Serum calcium.
- C. Thyroid activity.
- D. Serum alkaline phosphatase.

Coronary artery occlusion can lead to

- A. thrombosis.
- B. embolism.
- C. infarction.
- D. fatty degeneration.

Untreated diabetes mellitus characteristically demonstrates

- A. hypoglycemia.
- B. hyperglycemia.
- C. hypophagia.
- D. hyperlipidemia.
- E. dysuria.

The term applied to a low white blood cell count is

- A. leukocytosis.
- B. leukopenia.
- C. thrombocythemia.
- D. thrombocytopenia.

Erythroblastosis fetalis may be a cause of

- A. supernumerary incisors.
- B. pigmented teeth.
- C. peg lateral incisors.
- D. Fordyce's granules.
- E. blue sclerae.

A patient who uses nitroglycerine has

- A. rheumatic heart disease.
- B. asthma.
- C. coronary artery disease.
- D. high blood pressure.
- E. cardiac arrhythmia.

When a patient experiences continuous pain in the maxillary premolar and molar areas and there is no evidence of dental infection, the most likely diagnosis is

- A. trigeminal neuralgia.
- B. acute maxillary sinusitis.
- C. impacted maxillary canine.
- D. impacted maxillary third molar.
- E. glossopharyngeal neuralgia.

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Acellular cementum on a root is

- A. the result of chronic inflammation.
- B. a defective cementoid substance.
- C. caused by premature degeneration of Hertwig's root sheath.
- D. a normal anatomical structure.

Which one of the following teeth is most frequently impacted?

- A. Maxillary cuspid.
- B. Mandibular second molar.
- C. Mandibular cuspid.
- D. Maxillary first premolar.

The benign neoplasm that originates from squamous epithelium is called a/an

- A. adenoma.
- B. choriocarcinoma.
- C. chondroma.
- D. lipoma.
- E. papilloma.

The apical region of a non-vital tooth with a deep carious lesion may radiographically show

- 1. widening of the periodontal space.
  - 2. loss of lamina dura.
  - 3. a circumscribed radiolucency.
  - 4. calcification of the periodontal membrane.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In infectious mononucleosis you are most likely to find

- 1. a positive Paul Bunnell test.
  - 2. lymphadenopathy.
  - 3. palatine petechiae.
  - 4. leukopenia.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Proper collimation of the useful beam for the film size and target-film distance will reduce

- 1. intensity of central beam.
  - 2. secondary radiation.
  - 3. radiographic contrast.
  - 4. image definition.
  - 5. radiation received by patient.
- A. (1) (2) (3) (5)
  - B. (1) (3) (4) (5)
  - C. (2) (3) (4) (5)
  - D. (2) and (5)
  - E. All of the above.

Selection of the appropriate kilovoltage for dental films is influenced by

- A. line voltage fluctuation.
- B. diameter of the primary beam of radiation.
- C. type of timer.
- D. tissue density.
- E. filter thickness.

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The fixing solution serves the purpose of

1. carrying on development.
  2. hardening the emulsion.
  3. removing unexposed silver salts.
- A. (1) and (2)  
B. (1) and (3)  
C. (2) and (3)  
D. All of the above.  
E. None of the above.

A radiolucent area in a radiograph occurs as a result of

1. decreased density of tissue.
  2. increased density of tissue.
  3. more radiation affecting the silver halide crystals.
  4. increased exposure time.
- A. (4) only  
B. (2) and (3)  
C. (1) and (3)  
D. (1) only  
E. None of the above.

Ankylosis is commonly

- A. associated with a non-vital pulp.  
B. the result of a root fracture.  
C. associated with a root penetrating cavity.  
D. resulting in a submerged tooth, out of occlusion.  
E. found in permanent teeth.

In the early stage, a periapical abscess can be differentiated from a lateral periodontal abscess by

- A. pain.  
B. type of exudate.  
C. tenderness to percussion.  
D. response of pulp to electrical stimulation.  
E. radiographic examination.

In the presence of an acute bacterial infection, laboratory tests will show an increase in

- A. polymorphonuclear leukocytes.  
B. plasma cells.  
C. lymphocytes.  
D. monocytes.  
E. eosinophils.

A patient presents with apparent paralysis of one side of the face which appeared the day before. What is the most likely diagnosis?

- A. Glossodynia.  
B. Bell's palsy.  
C. Myasthenia gravis.  
D. Trigeminal neuralgia.

Sickle cell anemia is

- A. a genetic disease.  
B. caused by exposure to radiation.  
C. a viral infection.  
D. a drug reaction.  
E. an auto-immune disease.

An ameloblastoma is most frequently found in

- A. the anterior region of the maxilla.  
B. the mandible, near the junction of the body and the ramus.  
C. the posterior region of the maxilla.  
D. in the anterior region of the mandible near the midline.

Multiple giant cell lesions of the bone are associated with

- A. hyperthyroidism.  
B. hypothyroidism.  
C. hyperparathyroidism.  
D. hypoparathyroidism.

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A common clinical sign of occlusal traumatism is

- A. tooth mobility.
- B. pocket formation.
- C. gingival recession.
- D. temporomandibular joint pain - dysfunction syndrome.
- E. pulp calcifications.

Which gingival manifestation(s) would be expected in a patient with a blood dyscrasia?

- 1. Enlargement.
  - 2. Bleeding.
  - 3. Ulceration.
  - 4. Atrophy.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which one of the following is the most common tumour of the salivary glands?

- A. Adenocystic carcinoma.
- B. Adenoma.
- C. Pleomorphic adenoma.
- D. Muco-epidermoid carcinoma.

Mucocoeles are most commonly found in the

- A. upper lip.
- B. lower lip.
- C. tongue.
- D. buccal mucosa.
- E. soft palate.

"Dens in dente" (dens invaginatus) is associated with

- A. supernumerary teeth.
- B. dentinogenesis imperfecta.
- C. osteogenesis imperfecta.
- D. anterior teeth.
- E. amelogenesis imperfecta.

Multiple supernumerary teeth are most commonly found in

- A. cherubism.
- B. cretinism.
- C. hypothyroidism.
- D. cleidocranial dysplasia.
- E. Down's syndrome.

A draining fistula of short duration related to a tooth undergoing endodontic therapy requires

- A. irrigation of canals.
- B. antibiotics.
- C. surgical excision.
- D. no special treatment.

Among the following, which may be associated with root resorption?

- 1. Excessive orthodontic forces.
  - 2. Periapical granuloma.
  - 3. Cementoma.
  - 4. Hypercementosis.
  - 5. Traumatic injury.
- A. (1) (2) (4)
  - B. (1) (2) (4) (5)
  - C. (1) (2) (5)
  - D. (1) (2) (3) (5)
  - E. All of the above.

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Which of the following is NOT a sign or symptom of the myofascial pain dysfunction syndrome?

- A. Pain.
- B. Muscle tenderness.
- C. Limitation of jaw motion.
- D. "Clicking" or "popping" noise in the joints.
- E. Radiographic changes of the joint.

In radiography, a parallel technique or right angle technique as opposed to a bisecting angle technique will result in

- 1. less gonadal radiation.
- 2. greater entrance dosage.
- 3. less dimensional distortion.
- 4. a more heterogenous beam of X-rays.

- A. (1) (2) (4)
- B. (2) and (3)
- C. (2) and (4)
- D. (1) and (3)
- E. All of the above.

The most logical explanation for causing swelling beneath the eye caused by an abscessed maxillary canine is that the

- A. lymphatics drain superiorly in this region.
- B. bone is less porous superior to the root apex.
- C. infection has passed into the angular vein which has no valves.
- D. the root apex lies superior to the attachment of the caninus and levator labii superioris muscles.

The finding of "acid-fast" microorganisms in sputum suggests the presence of

- A. Mycobacterium tuberculosis.
- B. Diplococcus pneumoniae.
- C. Streptococcus pyogenes.
- D. Neisseria gonorrhoeae.

Excessive formation of scar tissue beyond the wound margin is called

- A. a fibroma.
- B. a keloid.
- C. a fibro-epithelial polyp.
- D. epithelial hyperplasia.

Petechiae are

- A. macules.
- B. papules.
- C. nodules.
- D. vesicles.
- E. bullae.

The earliest radiographic sign of occlusal trauma is

- A. hypercementosis.
- B. root resorption.
- C. alteration of the lamina dura.
- D. widening of the periodontal ligament space.
- E. ankylosis.

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In radiography, minimum magnification and maximum definition are achieved by

- A. minimum OFD (object-film distance) and minimum FFD (focal-film distance).
- B. minimum OFD (object-film distance) and maximum FFD (focal-film distance).
- C. maximum OFD (object-film distance) and maximum FFD (focal-film distance).
- D. maximum OFD (object-film distance) and minimum FFD (focal-film distance).

Intermittent painful swelling in the submandibular region that increases at mealtime is indicative of

- A. a ranula.
- B. a blockage of Wharton's duct.
- C. Ludwig's angina.
- D. a blockage of Stensen's duct.
- E. an epidemic parotitis.

Which of the following is NEVER associated with an impacted tooth?

- A. Adeno-ameloblastoma.
- B. Odontogenic myxoma.
- C. Pindborg's tumor.
- D. Primordial cyst.
- E. Ameloblastoma.

Which of the following is/are NOT usually affected by hereditary ectodermal dysplasia?

- A. Salivary glands.
- B. Teeth.
- C. Sweat glands.
- D. Hair.
- E. Fingernails.

Which of the following is NOT associated with infectious mononucleosis?

- A. Pharyngitis.
- B. Lymphadenopathy.
- C. Petechiae of the palate.
- D. Gingival enlargement.
- E. Fatigue.

The term "carcinoma in situ" implies that the lesion shows

- A. metaplasia.
- B. early invasion of malignant cells through the basement membrane.
- C. dysplasia of cells confined within the epithelium.
- D. distant metastasis of a malignant tumour.

Which one of the following would be of greatest value in determining the etiology of an oral ulceration?

- A. History of the oral lesion.
- B. Cytological smear.
- C. Systemic evaluation.
- D. Laboratory tests.

A patient with congestive heart failure may have

- 1. epistaxis.
  - 2. shortness of breath.
  - 3. exophthalmos.
  - 4. pitting edema of the ankles.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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In Canada, it is ethical for a dentist to refuse to treat a patient on the basis of the

- A. patient's religious beliefs.
- B. patient's physical handicap.
- C. patient's infectious disease status.
- D. complexity of the required treatment.

A pontic replacing a mandibular first molar should be designed so that it(s)

- 1. gingival surface is concave and adapts closely to the ridge.
- 2. has open gingival embrasures.
- 3. conceals the porcelain to metal junction on its gingival surface.
- 4. gingival surface is convex in all directions.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A patient suddenly becomes pale and sweaty after an injection of 4ml of lidocaine 2% with epinephrine 1:100,000. The radial pulse is slow and steady. The respiration is slow. The blood pressure is 80/60. What is the most probable diagnosis?

- A. A toxic reaction to lidocaine.
- B. A toxic reaction to epinephrine.
- C. An allergic reaction to the local anesthetic.
- D. Incipient syncope.
- E. An impending adrenal insufficiency.

Which of the following will impede healing following the surgical closure of an oro-antral fistula?

- 1. Poor flap design.
- 2. Excessive tissue tension.
- 3. Blowing the nose.
- 4. Sinus infection.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A periapical infection of a mandibular third molar may spread by direct extension to the

- 1. parapharyngeal space.
- 2. submandibular space.
- 3. pterygomandibular space.
- 4. submental space.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following is NOT an indication for the removal of impacted mandibular third molars?

- A. Recurrent pericoronitis.
- B. Crowding of incisors.
- C. Pain.
- D. Resorption of the distal aspect of the second molar.

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The most likely complication associated with the extraction of an isolated maxillary second molar is

- A. a dry socket.
- B. nerve damage.
- C. fracture of the malar ridge.
- D. fracture of the tuberosity.

A patient presenting with diplopia, exophthalmos, nasal bleeding and swelling, may suffer from a fracture of the

- A. neck of the condyle.
- B. body of the mandible.
- C. zygomatic bone.
- D. maxillary tuberosity.

Bacterial infection may be confirmed by

- 1. white blood cell count.
  - 2. hemoglobin level.
  - 3. erythrocyte sedimentation rate.
  - 4. platelet count.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In an acute upper airway obstruction, the entry to the airway on an emergency basis should be made at the

- A. cricoid cartilage.
- B. thyroid notch.
- C. thyroid membrane.
- D. cricothyroid membrane.
- E. first tracheal ring.

In a patient with liver disease, a possible complication is

- A. syncope or shock.
- B. postoperative infection.
- C. prolonged bleeding.
- D. allergic reaction to the anesthetic solution.

Ludwig's angina may cause death by

- A. heart failure.
- B. asphyxia.
- C. convulsions.
- D. paralysis of muscles of respiration.
- E. pyemia.

It is difficult to obtain satisfactory anesthesia in the presence of infection near the injection site because

- A. the swelling causes increased pressure on the nerves.
- B. increased blood supply carries the anesthetic solution away too fast.
- C. acidity of the infected tissue inhibits action of the anesthetic agent.
- D. alkalinity of the infected tissue inhibits action of the anesthetic agent.

Which of the following is best removed by curettage?

- A. Ameloblastoma.
- B. Pleomorphic adenoma.
- C. Central giant cell granuloma.
- D. Squamous cell carcinoma.
- E. Cylindroma.

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Which of the following is directly involved in the conversion of prothrombin to thrombin?

- A. Sodium.
- B. Calcium.
- C. Fluoride.
- D. Potassium.
- E. Bicarbonate.

The major stimulator of respiration is

- A. low blood pressure.
- B. high percentage of blood oxygen.
- C. low percentage of blood carbon dioxide.
- D. high percentage of blood carbon dioxide.

The most common complication of a venipuncture is

- A. syncope.
- B. hematoma.
- C. thrombophlebitis.
- D. embolus.

Antihistamines act by

- A. increasing the action of histaminase.
- B. altering the formation of histamine.
- C. blocking the actions of histamine by competitive inhibition.
- D. interfering with the degradation of histamine.

Which of the following does NOT relieve pain?

- A. Codeine.
- B. Methadone.
- C. Meperidine.
- D. Hydromorphone.
- E. Chloral hydrate.

Adrenal corticosteroids

- 1. cause diabetes.
- 2. cause retention of sodium and fluid.
- 3. heighten the immune response.
- 4. decrease the immune response.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Tetracyclines

- 1. have no side effects.
- 2. may increase susceptibility to superinfections.
- 3. are safe to use during pregnancy.
- 4. have a wide spectrum of antibacterial activity.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which valve is most commonly affected by rheumatic heart disease?

- A. Aortic.
- B. Pulmonary.
- C. Tricuspid.
- D. Mitral.

A therapeutic advantage of penicillin V over penicillin G is

- A. greater resistance to penicillinase.
- B. broader antibacterial spectrum.
- C. greater absorption when given orally.
- D. slower renal excretion.
- E. None of the above.

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Trismus is most frequently caused by

- A. tetanus.
- B. muscular dystrophy.
- C. infection.
- D. mandibular fracture.

Acetaminophen in therapeutic doses

- 1. retards platelet function.
  - 2. has strong anti-inflammatory properties.
  - 3. produces CNS stimulation.
  - 4. has antipyretic properties.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Short-acting barbiturates are metabolized mainly in the

- A. liver.
- B. kidneys.
- C. small intestine.
- D. pancreas.
- E. spleen.

Acquired Immune Deficiency Syndrome (AIDS) may be characterized by

- 1. candidiasis.
  - 2. rapid weight loss and night sweats.
  - 3. extreme malaise, fever or chills.
  - 4. a smooth and red tongue.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following does NOT influence the rate of induction during inhalation anesthesia?

- A. Pulmonary ventilation.
- B. Blood supply to the lungs.
- C. Hemoglobin content of the blood.
- D. Concentration of the anesthetic in the inspired mixture.
- E. Solubility of the anesthetic in blood.

Which of the following would you prescribe for an anxious dental patient with a peptic ulcer?

- A. Reserpine.
- B. Scopolamine.
- C. Silica gel.
- D. Diazepam.
- E. Calcium carbonate.

Unconsciousness in syncope results from

- A. electrolyte imbalance.
- B. neurogenic shock.
- C. cerebral hyperemia.
- D. cerebral hypoxia.

The appearance of a rash, itching, bronchoconstriction and fever after the administration of a drug are the result of

- A. allergy.
- B. tolerance.
- C. idiosyncrasy.
- D. teratogenicity.

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Which of the following statements is/are true regarding diazepam?

1. Its long duration of action is partly due to active metabolites.
  2. It does not produce antianxiety effects after intramuscular administration.
  3. Intravenous administration is more reliable than oral.
  4. Its sedative effect can be reversed by naloxone.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The inorganic ion that is implicated in primary hypertension is

- A. sodium.  
B. fluoride.  
C. potassium.  
D. magnesium.

In a standard dental cartridge (carpule) containing 1.8ml 2% lidocaine with epinephrine 1/100,000, the amount of vasoconstrictor is

- A. 18.0 mg.  
B. 0.018 mg.  
C. 1.8 mg.  
D. 0.18 mg.  
E. 180.0 mg.

Vestibuloplasty is a preprosthetic surgical procedure used to

- A. facilitate reliable impression making.  
B. provide adequate posterior inter-arch space.  
C. allow placement of teeth over the residual ridge.  
D. increase the supporting surface area.

In a standard inferior alveolar nerve block, which muscle is penetrated by the needle?

- A. Buccinator.  
B. Mylohyoid.  
C. Superior constrictor.  
D. Masseter.  
E. Medial (internal) pterygoid.

High plasma levels of local anesthetics may cause

- A. inhibition of peristalsis.  
B. stimulation of the central nervous system.  
C. inhibition of the vagus nerve to the heart.  
D. depression of the central nervous system.

Which of the following nerves should be anesthetized for extraction of a maxillary lateral incisor?

1. Nasociliary.
  2. Nasopalatine.
  3. Sphenopalatine.
  4. Anterior superior alveolar.
- A. (1) and (2)  
B. (1) (3) (4)  
C. (2) (3) (4)  
D. (2) and (4)  
E. (3) and (4)

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Which of the following is the strongest stimulus to respiration?

- A. Decrease in arterial pH.
- B. Increase in arterial oxygen.
- C. Decrease in arterial oxygen.
- D. Increase in arterial carbon dioxide.
- E. Decrease in arterial carbon dioxide.

Death from barbiturates is the result of

- A. alkalosis.
- B. irreversible hypotension.
- C. toxic effects on the liver.
- D. depression of the centres of respiration.
- E. allergy.

A 57 year old man received 10mg of diazepam intravenously. He becomes unresponsive to verbal stimuli, and his respirations are depressed to 10 per minute. Appropriate treatment is to

- A. administer ephedrine.
- B. observe the patient.
- C. force the patient to drink coffee.
- D. support respiration with oxygen.

The chief mechanism by which the body metabolizes short-acting barbiturates is

- A. oxidation.
- B. reduction.
- C. hydroxylation and oxidation.
- D. sequestration in the body fats.

In the treatment of an acute anaphylactic reaction, the first drug that should be administered is

- A. hydroxyzine.
- B. epinephrine.
- C. hydrocortisone.
- D. diphenhydramine.

Bilateral dislocated fractures of the mandibular condyles result in

- 1. anterior open bite.
  - 2. anesthesia of the mental nerves.
  - 3. inability to protrude the mandible.
  - 4. inability to bring the molars into contact.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

An acute periapical abscess originating from a mandibular third molar generally points and drains in the

- A. submandibular space.
- B. pterygomandibular space.
- C. buccal vestibule.
- D. buccal space.

During extraction of a maxillary third molar, the tuberosity is fractured. The tooth with the tuberosity remains attached to the surrounding soft tissue. You should

- A. remove both and suture.
- B. leave both and stabilize, if possible.
- C. remove both, fill the defect with Gelfoam and suture.
- D. reflect the mucoperiosteum, remove the tooth, leaving the tuberosity in place and suture.

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Which of the following lower(s) the body temperature increased by bacterial pyrogens?

1. Acetaminophen.
  2. Bradykinin.
  3. Acetylsalicylic acid.
  4. Codeine.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Hydrochlorothiazide (Hydrodiuril) is used to treat

1. hypertension.
  2. angina pectoris.
  3. atrial fibrillation.
  4. ventricular fibrillation.
  5. congestive heart failure.
- A. (1) and (2)
  - B. (2) and (3)
  - C. (3) and (4)
  - D. (1) and (5)

When sutures are used to reposition tissue over extraction sites, they should be

1. placed over firm bone where possible.
  2. interrupted, 15mm apart.
  3. firm enough to approximate tissue flaps without blanching.
  4. tight enough to produce immediate hemostasis.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following nerves should be anesthetized for the removal of a maxillary first molar?

1. Greater palatine.
  2. Naso palatine.
  3. Middle superior alveolar.
  4. Anterior superior alveolar.
  5. Posterior superior alveolar.
- A. (1) (2) (4)
  - B. (1) (3) (4)
  - C. (1) (3) (5)
  - D. (2) (3) (5)
  - E. (2) (4) (5)

What is the maximum number of cartridges (1.8ml) of a 2% local anesthetic solution that can be administered without exceeding a total dose of 300mg?

- A. 2.
- B. 4.
- C. 6.
- D. 8.
- E. 10.

After an inferior alveolar nerve block injection, a patient would develop seventh nerve paralysis if the injection was made into the

- A. internal maxillary artery.
- B. retroparotid space.
- C. internal pterygoid muscle.
- D. retromandibular vein.
- E. pterygoid plexus of veins.

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During normal growth, the gnathion, as viewed on successive cephalograms, will move

- A. downward and backward.
- B. downward and forward.
- C. backward and upward.
- D. forward only.

The cells responsible for root resorption are

- A. fibroblasts.
- B. cementoblasts.
- C. osteoblasts.
- D. osteoclasts.

In primary molars, radiographic bony changes from an infection are initially seen

- A. at the apices.
- B. in the furcation area.
- C. at the alveolar crest.
- D. at the base of the developing tooth.

An ankylosed deciduous molar can cause

- A. delayed eruption of the succeeding premolar.
- B. alteration of arch length.
- C. difficulty with extraction.
- D. All of the above.

The eruption of a permanent central incisor may be delayed by

- A. a supernumerary tooth.
- B. dense fibrous tissue.
- C. a retained deciduous incisor.
- D. All of the above.

A radiographic examination of a 10 year old child reveals retention of deciduous teeth and presence of many unerupted supernumerary teeth. This is characteristic of

- A. cleidocranial dysplasia.
- B. ectodermal dysplasia.
- C. dentinogenesis imperfecta.
- D. congenital hypothyroidism.

In cephalometry, the most stable point in a growing skull is the

- A. sella turcica.
- B. nasion.
- C. Broadbent's point.
- D. Bolton point.

Which of the following patients should be referred for orthodontic treatment to close a diastema between maxillary central incisors?

1. An 8-year old with no abnormal oral habits.
2. A 14-year old with no abnormal oral habits.
3. A 3-year old with a 4mm overjet.
4. An 8-year old with a previous thumb habit.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The radiographic appearance of internal resorption is

- A. radiolucent enlargement of the pulp cavity.
- B. radiolucency around the apex of the root.
- C. radiolucency on the surfaces of the root.
- D. localized radiopacities in the pulp cavity.
- E. radiopacity around the apex of the root.

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Roots of the permanent maxillary central incisors are completed by what age?

- A. 8 years.
- B. 10 years.
- C. 12 years.
- D. Later than 12 years.

The developing permanent tooth

- A. lies apically and lingually to primary teeth in the anterior region.
- B. may show deviated eruption times if the primary tooth is lost prematurely.
- C. has a more protrusive path of eruption in the anterior region.
- D. All of the above.

An endomorph is characterized as a person who

- A. is short and fat.
- B. is tall and thin.
- C. is muscular.
- D. matures early.
- E. matures late.

In a normal eruption pattern, the last primary tooth to be lost is the

- A. maxillary canine.
- B. mandibular canine.
- C. maxillary first molar.
- D. mandibular second molar.
- E. maxillary second molar.

Cleidocranial dysostosis is distinguished by

- A. usually shortened skull.
- B. delayed suture closure.
- C. persistence of deciduous teeth.
- D. clavicles absent or maldeveloped.
- E. All of the above.

The principal growth sites of the maxilla in a downward and forward direction include the

- 1. frontomaxillary suture.
- 2. zygomaticomaxillary suture.
- 3. pterygopalatine suture.
- 4. median palatine suture.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

Mandibular growth

- A. is sustained over a longer period of time in girls.
- B. is sustained over a longer period of time in boys.
- C. occurs at the same chronologic age in both sexes.
- D. occurs two years earlier in boys than in girls.

Hypothyroidism affects the dental developmental pattern by

- A. interfering with jaw growth.
- B. delaying the eruption timetable.
- C. causing sclerotic bone to form over the occlusal surface of erupting teeth.
- D. accelerating the eruption timetable.

A single tooth anterior crossbite found in a 9 year old should

- A. self-correct.
- B. be treated with a removable appliance.
- C. have 2 arch orthodontic treatment.
- D. be treated in the complete permanent dentition.
- E. be observed and treated when the cuspids have erupted.

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The roots of the first permanent molar should be completely formed by the age of

- A. six years.
- B. seven years.
- C. nine years.
- D. eleven years.
- E. thirteen years.

The primary stimulus for growth of the mandible is

- A. genetic.
- B. epigenetic.
- C. environmental.
- D. functional.
- E. A. and D.

As the mandible grows downward and forward, bone deposition takes place

- A. on all surfaces of the mandible.
- B. on the posterior border of the ramus.
- C. on the anterior border of the ramus.
- D. on the alveolar margins.
- E. B. and D.

A patient who is jaundiced because of liver disease has an increased risk of

- 1. postextraction bleeding.
  - 2. cardiac arrest.
  - 3. postoperative infection.
  - 4. anaphylactic shock.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Cartilage grows by

- A. interstitial growth.
- B. appositional growth.
- C. both appositional and interstitial growth.
- D. None of the above.

Alveolar bone is undergoing remodeling

- A. through the primary dentition.
- B. until the end of mixed dentition.
- C. until the complete eruption of permanent teeth.
- D. throughout life.

The roots of primary molars in the absence of their permanent successors

- 1. sometimes are partially resorbed and become ankylosed.
  - 2. may remain for years with no significant resorption.
  - 3. may remain for years partially resorbed.
  - 4. are always resorbed.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A single hypoplastic defect located on the labial surface of a maxillary central incisor is most likely due to a/an

- A. dietary deficiency.
- B. endocrine deficiency.
- C. tetracycline therapy.
- D. trauma to the maxillary primary central incisor.
- E. high fluoride intake.

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The term "dental age" refers to the

- A. state of dental maturation.
- B. eruption time of a given tooth.
- C. number of years elapsed since a given tooth erupted.
- D. None of the above.

A 3 year old requires the extraction of a deciduous maxillary second molar. The local anesthetic technique of choice is

- A. a posterior superior alveolar block.
- B. buccal and palatal infiltration.
- C. a tuberosity block plus subperiosteal infiltration of the mesio-buccal root.
- D. an infra-orbital block.

The mechanism of adjustment to maintain the shape and proportions of bone throughout its growth period is called

- A. remodeling.
- B. cortical drift.
- C. area relocation.
- D. translatory growth.

The most frequent cause of malocclusion is

- A. thumbsucking.
- B. mouth breathing.
- C. heredity.
- D. ectopic eruption.

The interocclusal relationship of the primary second molars

- 1. does not affect the resultant permanent molar relationship.
- 2. is normal if there is a flush terminal plane.
- 3. determines the amount of leeway space.
- 4. may aid in the prediction of permanent tooth malocclusion.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

Which of the following is/are essential when using spherical rather than admix alloy for a routine amalgam restoration?

- 1. a larger diameter condenser.
- 2. an anatomical wedge.
- 3. decreased condensing pressure.
- 4. a dead soft matrix band.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following fibre groups are attached to bone?

- 1. Apical.
- 2. Oblique.
- 3. Alveolar crest.
- 4. Circular.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

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The oral mucosa covering the base of the alveolar bone

- A. is normally non-keratinized but can become keratinized in response to physiological stimulation.
- B. is closely bound to underlying muscle and bone.
- C. does not contain elastic fibres.
- D. merges with the keratinized gingiva at the mucogingival junction.
- E. has a tightly woven dense collagenous corium.

Which oral condition predisposes to caries?

- A. Xerostomia.
- B. Leukoplakia.
- C. Pharyngitis.
- D. Stomatitis medicamentosa.

After tooth eruption, which of the following materials gradually decreases in concentration from the enamel surface ?

- A. Carbonate.
- B. Protein.
- C. Fluoride.
- D. Calcium.
- E. Chloride.

A diet survey can provide which of the following information for the prevention of dental caries?

- A. Total carbohydrate consumption.
- B. Frequency of fermentable carbohydrate consumption.
- C. Total protein consumption.
- D. Daily calcium intake.

Which of the following foods is the most cariogenic?

- A. Cheese.
- B. Dark chocolate.
- C. Jam.
- D. Toffee.

In chewing, maximum contact between teeth occurs in the position of

- A. habitual occlusion.
- B. lateral excursion on the non-working side.
- C. protrusive excursion.
- D. All of the above

Epidemiology of disease is best described as the

- A. data obtained from sickness surveys.
- B. usual low level of disease normally found within a population.
- C. control of disease.
- D. study of disease patterns in a population.

Which of the following oral diseases are largely preventable through lifestyle adjustments?

1. Dental caries.
2. Periodontal disease.
3. Oral malignancies.
4. Cleft lip and palate.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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With the development of gingivitis, the sulcus becomes predominantly populated by

- A. gram-positive organisms.
- B. gram-negative organisms.
- C. diplococcal organisms.
- D. spirochetes.

The colour of normal gingiva is affected by the

- 1. vascularity of the gingiva.
- 2. epithelial keratinization.
- 3. thickness of the epithelium.
- 4. melanin pigmentation.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In health, the crest of the alveolar bone, as seen in a radiograph, is situated 1~to~2mm apical to the cemento-enamel junction. .sp 1  
Radiographically, the normal alveolar crest should parallel an imaginary line drawn between the cemento-enamel junction of adjacent teeth.

- A. The first statement is true, the second is false.
- B. The first statement is false, the second is true.
- C. Both statements are true.
- D. Both statements are false.

Acquired pellicle

- A. is composed of salivary glycoproteins.
- B. takes 24 hours to establish.
- C. is difficult to remove.
- D. causes inflammation.

Which cells migrate into the gingival sulcus in the largest numbers in response to the accumulation of plaque?

- A. Plasma cells and monocytes.
- B. Polymorphonuclear leukocytes.
- C. Macrophages.
- D. Lymphocytes.
- E. Mast cells.

Which of the following contains microorganisms?

- A. Acquired pellicle.
- B. Calculus.
- C. Dental plaque.
- D. B. and C.
- E. All of the above.

A gingivectomy may be performed when there is/are

- A. horizontal bone loss.
- B. no intrabony defects.
- C. an adequate zone of attached gingiva.
- D. a gingival pocket.
- E. All of the above.

In periodontal flap surgery, the design of the incision is influenced by the

- A. frenum attachment.
- B. depth of the vestibule.
- C. amount of attached gingiva.
- D. presence of infrabony defects.
- E. All of the above.

Occlusal (night) guards are used to

- A. treat bruxism.
- B. reduce pocket formation.
- C. prevent pulpitis.
- D. permit eruption or elongation of teeth.

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Maximum shrinkage after gingival curettage can be expected from tissue that is

- A. fibroedematous.
- B. edematous.
- C. fibrotic.
- D. formed within an infrabony pocket.
- E. associated with exudate formation.

As gingival inflammation progresses to marginal periodontitis, the associated changes are:

- A. Apical migration and disintegration of the epithelial attachment.
- B. Resorption of the alveolar crest.
- C. Destruction of the alveolar crest and periodontal ligament fibres.
- D. All of the above.
- E. None of the above.

During tooth development, vitamin A deficiency may result in

- A. peg-shaped teeth.
- B. partial anodontia (hypodontia).
- C. Hutchinson's incisors.
- D. enamel hypoplasia.
- E. dentinogenesis imperfecta.

Dietary deficiency of vitamin D can result in

- A. abnormal formation of osteoid.
- B. osteitis fibrosa cystica.
- C. Paget's disease.
- D. myositis ossificans.
- E. osteogenesis imperfecta.

Dental plaque is composed of

- A. desquamated epithelial cells.
- B. components from oral secretions.
- C. bacteria and their products.
- D. cuticle or pellicle.
- E. All of the above.

The periodontium is best able to tolerate forces directed to a tooth

- A. horizontally.
- B. laterally.
- C. obliquely.
- D. vertically.

Which of the following root surfaces are most likely to have concavities that will make root planing difficult?

- 1. Mesial surfaces of maxillary first premolars.
  - 2. Mesial surfaces of mandibular incisors.
  - 3. Mesial surfaces of maxillary incisors.
  - 4. Distal surfaces of mandibular second premolars.
- A. (1) and (2)
  - B. (1) and (3)
  - C. (1) and (4)
  - D. (2) and (4)
  - E. (3) and (4)

Plaque accumulation on tooth surfaces is affected by

- A. the anatomy, position and surface characteristics of the teeth.
- B. the architecture of the gingival tissues and their relationship to the teeth.
- C. friction at the tooth surface from the diet, lips and tongue.
- D. All of the above.

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Calculus contributes to gingival inflammation by

- A. having a porous surface.
- B. having cytotoxic bacterial products.
- C. promoting bacterial colonization.
- D. all of the above.

Abnormalities in blood clotting may be associated with a deficiency of vitamin

- A. B12.
- B. C.
- C. E.
- D. K.

Overhangs on restorations initiate chronic inflammatory periodontal disease by

- A. increasing plaque retention.
- B. increasing food retention.
- C. causing traumatic occlusion.
- D. causing pressure atrophy.

Caries in older persons is most frequently found on which of the following locations?

- A. Pits and fissures.
- B. Proximal enamel.
- C. Root surfaces.
- D. Incisal dentin.

Which treatment procedure is indicated for a patient with asymptomatic age related gingival recession?

- A. Connective tissue graft.
- B. Gingivoplasty.
- C. Lateral sliding flap.
- D. Gingival graft.
- E. No treatment.

Irregularly distributed shallow to moderate craters in the interseptal bone are best eliminated by

- A. osteoplasty.
- B. gingivoplasty.
- C. deep scaling.
- D. bone grafting.

Vitamin D is a factor in

- A. caries susceptibility.
- B. calculus formation.
- C. calcium absorption.
- D. repair of hypoplastic defects of the enamel.

The principal component of the fibres of the periodontal ligament is

- A. elastin.
- B. reticulin.
- C. fibronectin.
- D. collagen.

Vitamin C is essential for

- A. formation of collagen.
- B. osteoid.
- C. dentin.
- D. cementum.
- E. All of the above.

In a young patient living in an area with communal water fluoridation, the fluoride concentration of an erupted tooth is greatest

- A. at the dentino-enamel junction.
- B. on the surface of the clinical crown.
- C. at the layer of dentin nearest the pulp chamber.
- D. evenly throughout the enamel.

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DMF-S is an index for expressing

- A. dental needs.
- B. tooth mortality.
- C. extent of dental neglect.
- D. dental caries.

A clenching habit may be a factor in

- A. suprabony periodontal pocket formation.
- B. marginal gingivitis.
- C. increased tooth mobility.
- D. generalized recession.

Regarding dental caries, which of the following is correct?

- A. All carbohydrates are equally cariogenic.
- B. More frequent consumption of carbohydrates increases the risk.
- C. The rate of carbohydrate clearance from the oral cavity is not significant.
- D. Increased dietary fat increases the risk.

Abrasion is most commonly seen on the

- A. lingual surface of posterior teeth.
- B. occlusal surface of posterior teeth.
- C. incisal edges.
- D. facial surfaces of teeth.

Carious lesions are most likely to develop if a patient has

- A. a high lactobacillus count.
- B. saliva with low buffering capacity.
- C. plaque on his teeth.
- D. lactic acid in his mouth.

The most important objective of occlusal adjustment of a natural dentition is to

- A. prevent temporomandibular joint syndrome.
- B. increase the shearing action in mastication.
- C. improve oral hygiene by preventing food impaction.
- D. achieve a more favorable direction and distribution of forces of occlusion.

An increase of immunoglobulins is consistent with increased numbers of

- A. fibroblasts.
- B. neutrophils.
- C. lymphocytes.
- D. plasma cells.

The predominant organisms associated with active periodontitis are

- 1. cocci.
  - 2. rods.
  - 3. spirochetes.
  - 4. motile rods.
- A. (1) and (2)
  - B. (3) and (4)
  - C. (1) only
  - D. (1) and (3)
  - E. All of the above.

In periodontics, the best prognosis for bone regeneration follows the surgical treatment of

- A. suprabony pockets.
- B. one-wall infrabony pockets.
- C. two-wall infrabony pockets.
- D. three-wall infrabony pockets.

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The epithelial attachment does not migrate apically in

- A. juvenile periodontitis.
- B. hyperplastic gingivitis.
- C. chronic periodontitis.
- D. rapidly progressive periodontitis.

The absence of adequate drainage in a periodontal pocket may result in

- A. cyst formation.
- B. abscess formation.
- C. epithelial hyperplasia.
- D. increased calculus formation.

Necrotizing ulcerative gingivitis (NUG) and acute herpetic gingivostomatitis can be differentiated clinically by (the)

- A. location of the lesions.
- B. temperature of the patient.
- C. pain.
- D. lymphadenopathy.

The instrument best suited for root planing is a/an

- A. hoe.
- B. file.
- C. curette.
- D. sickle scaler.
- E. ultrasonic scaler.

The tissues of the epithelial attachment

- A. are dynamic rather than static.
- B. can be reconstituted by repair.
- C. exhibit a high rate of biologic turnover.
- D. All of the above.
- E. None of the above.

A removable full-arch occlusal splint is used to

- A. reduce pocket formation.
- B. allow for individual tooth movement.
- C. reduce unfavorable forces on teeth.
- D. permit eruption or elongation of teeth.

The coronal collagen fibres of the periodontium are

- A. circular.
- B. transeptal.
- C. suprapariosteal.
- D. All of the above.

Correction of an inadequate zone of attached gingiva on several adjacent teeth is best accomplished with a/an

- A. apically repositioned flap.
- B. laterally positioned sliding flap.
- C. double-papilla pedicle graft.
- D. coronally positioned flap.
- E. free gingival graft.

The higher modulus of elasticity of a chromium-cobalt-nickel alloy, compared to a Type IV gold alloy, means that chromium-cobalt-nickel partial denture clasp will require

- A. a heavier cross section for a clasp arm.
- B. a shorter retentive arm.
- C. more taper.
- D. a shallower undercut.

From Type I to Type IV gold alloys there is

- A. an increase in gold content.
- B. no change in the gold content.
- C. a reduction in gold content.
- D. a reduction in platinum content.

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The gypsum material used for fabrication of dies exhibits a higher crushing strength than does regular stone because of

- A. difference in particle shape and density.
- B. difference in the chemical composition of the powder particles.
- C. exothermic heat of setting.

The addition of platinum to a dental gold alloy results in increased

- 1. strength.
- 2. hardness.
- 3. melting point.
- 4. resistance to corrosion.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

During the setting phase, a dental stone mixture will exhibit

- A. expansion.
- B. contraction.
- C. loss in compressive strength.
- D. gain in moisture content.

A pontic replacing a mandibular first molar should be designed so that

- 1. it seals the muco-gingival field.
- 2. it has opened gingival embrasures.
- 3. it conceals the porcelain to metal junction on its gingival surface.
- 4. its gingival surface is convex in all directions.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

An epinephrine-containing retraction cord has the potential of

- A. interfering with the setting of the impression material.
- B. causing tissue necrosis.
- C. producing a systemic reaction.
- D. discolouring gingival tissue.

A cast post and core is used to

- 1. provide intraradicular venting.
- 2. strengthen a weakened tooth.
- 3. redirect the forces of occlusion.
- 4. provide retention for a cast crown.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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The gingival margin of the preparation for a full crown on a posterior tooth, with a clinical crown that satisfies the requirements for retention and resistance, should be placed

- A. 0.5mm subgingivally.
- B. on the enamel.
- C. at least 1mm supragingivally.
- D. at the cemento-enamel junction.
- E. at the gingival margin.

Adjustment of the occlusal plane of natural teeth opposed by a complete or partial denture should be completed

- A. after the teeth have been set on the trial denture.
- B. immediately after making the final casts.
- C. upon delivery of the denture.
- D. after the diagnosis and treatment plan has been established.

During the fabrication of new complete dentures, which of the following can be modified to achieve the desired occlusion?

- 1. The compensating curve.
  - 2. The orientation of the occlusal plane.
  - 3. The cusp inclination.
  - 4. The condylar inclination.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In the design of a removable partial denture, guiding planes are made

- A. parallel to the long axis of the tooth.
- B. parallel to the path of insertion.
- C. at a right angle to the occlusal plane.
- D. at a right angle to the major connector.

Which of the following should be checked first when a cast gold crown that fits on its die cannot be seated on its abutment?

- A. The occlusal contacts.
- B. The taper of the preparation.
- C. The proximal contacts.
- D. The impression used to pour the cast.

In the preparation of gypsum products, an increase in the water/powder ratio will

- A. increase the surface hardness.
- B. increase the compressive strength.
- C. accelerate the setting reaction.
- D. None of the above.

Which of the following are effects of cold working a metal?

- 1. Increase in ductility.
  - 2. Decrease in ductility.
  - 3. Increase in hardness.
  - 4. Increase in resistance to corrosion.
- A. (1) and (2)
  - B. (1) and (4)
  - C. (2) and (3)
  - D. (3) and (4)

Following the insertion of complete dentures, a generalized soreness over the entire mandibular alveolar ridge can be caused by

- A. Inadequate interocclusal distance.
- B. impingement on the buccal frenum.
- C. high muscle attachments.
- D. excess border thickness.

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A removable partial denture rest should

- A. be extended for retention.
- B. increase retention of the partial denture.
- C. direct forces parallel to the long axis of the abutment.
- D. be located on a centric contact.

In an edentulous maxilla, the direction of resorption of the alveolar ridge is

- A. upward and palatally.
- B. upward and facially.
- C. uniform in all directions.
- D. upward only.

Dental porcelain has

- 1. low compressive strength.
  - 2. high hardness.
  - 3. high tensile strength.
  - 4. low impact strength.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following structures affects the thickness of the flange of a maxillary complete denture?

- A. Malar process.
- B. Coronoid process.
- C. Mylohyoid ridge.
- D. Zygomatic process.
- E. Genial tubercle.

Upon examination of an edentulous patient, it is observed that the tuberosities contact the retromolar pads at the correct occlusal vertical dimension. The treatment of choice is to

- A. reduce the retromolar pads surgically to provide the necessary clearance.
- B. reduce the tuberosities surgically to provide the necessary clearance.
- C. construct new dentures at an increased occlusal vertical dimension to gain the necessary clearance.
- D. proceed with construction of the denture and reduce the posterior extension of the mandibular denture to eliminate interferences.

Where cavity preparations are extensive, polycarboxylate cement can be used as a base material because

- A. its pH stimulates secondary dentin formation.
- B. it interacts with setting amalgam to form a weak chemical union.
- C. it is biocompatible with the pulp.
- D. it is compressible when set.

The main reason for adding copper to a dental amalgam alloy is to

- A. increase expansion.
- B. reduce tarnish resistance.
- C. make amalgamation easier.
- D. increase lustre.
- E. reduce the tin-mercury phase.

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The polishing of an amalgam restoration

- A. should not be performed before 24 hours after insertion.
- B. completely prevents tarnish from occurring.
- C. removes the mercury rich surface layer of the amalgam.
- D. is more permanent if the surface is heated during the procedure.

Gold contributes which of the following properties to a gold-copper alloy?

- A. Corrosion resistance.
- B. Increased strength.
- C. Lowered specific gravity.
- D. Increased hardness.

A maxillary complete denture exhibits more retention and stability than a mandibular one because it

- 1. covers a greater area.
  - 2. incorporates a posterior palatal seal.
  - 3. is not subject to as much muscular displacement.
  - 4. is completely surrounded by soft tissue.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Glass ionomer cement restorations are indicated for

- A. root caries.
- B. incisal edge fractures.
- C. Class II lesions in adults.
- D. locations where esthetics are important.

The prime advantage of vacuum firing of porcelain is

- A. better colour.
- B. less shrinkage.
- C. more translucency.
- D. increased strength.

After initial setting, a chemically cured glass ionomer cement restoration should have a coating agent applied to

- A. hasten the final set.
- B. protect the cement from moisture.
- C. retard the final set.
- D. protect the cement from ultraviolet light.
- E. create a smooth finish.

The location of a crown margin is determined by

- 1. esthetic requirements.
  - 2. clinical crown length.
  - 3. presence of caries.
  - 4. presence of an existing restoration.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The principal purpose of amalgam trituration is to

- A. coat the alloy particles with mercury.
- B. dissolve all the alloy particles in the mercury.
- C. reduce the size of the crystals as rapidly as they form.
- D. reduce mercury content of the restoration.

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Which of the following muscles has two separate functions in mandibular movement?

- A. Masseter.
- B. Geniohyoid.
- C. External (lateral) pterygoid.
- D. Buccinator.

A lowering of serum calcium is the stimulus for the endogenous release of

- A. thyroid hormone.
- B. adrenocortical hormone.
- C. insulin.
- D. parathyroid hormone.
- E. adrenalin.

Collagen

- A. is most common in hard tissues.
- B. forms insoluble high tensile strength fibres.
- C. has a triple helical structure.
- D. All of the above.

The success of remineralization of "white spot" lesions is dependent upon the

- 1. pH of the saliva.
  - 2. frequency of the cariogenic challenge.
  - 3. availability of mineral ions in saliva.
  - 4. viscosity of the saliva.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Chronic alcoholism will

- 1. cause impairment of liver function.
  - 2. increase tendency to hemorrhage.
  - 3. delay healing.
  - 4. decrease the effectiveness of local anesthetics.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The main functions of fat soluble vitamins are:

- 1. Vitamin E is an important antioxidant.
  - 2. Vitamin A is important in the formation of visual purple.
  - 3. Vitamin D promotes intestinal calcium and phosphate absorption.
  - 4. Vitamin K catalyzes the synthesis of prothrombin.
  - 5. Vitamin A maintains the integrity of mucous membranes.
- A. (1) (2) (3)
  - B. (1) (4) (5)
  - C. (2) (3) (4)
  - D. All of the above.

Which of the following is the greatest risk factor for rampant caries in children?

- A. Frequent ingestion of polysaccharides.
- B. Frequent ingestion of high sucrose-containing foods.
- C. Severe enamel hypoplasia.
- D. Deficiency of vitamin D.

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Warfarin (Coumadin®) acts by

- A. preventing formation of thromboplastin.
- B. preventing fibrinogen conversion to fibrin.
- C. inhibiting the synthesis of prothrombin in the liver.
- D. incorporating ionic calcium.

Which of the following, if left untreated, is most likely to result in a periapical lesion?

- A. Internal resorption.
- B. Reversible pulpitis.
- C. Acute suppurative pulpitis.
- D. Chronic hyperplastic pulpitis.
- E. Diffuse calcification of the pulp.

In X-ray equipment, kilovoltage controls

- 1. contrast.
  - 2. speed of electrons.
  - 3. amount of radiation produced.
  - 4. penetrating power of radiation.
  - 5. temperature of the cathode filament.
- A. (1) and (2)
  - B. (1) (2) (4)
  - C. (1) (3) (5)
  - D. (1) and (4)

Using pins to retain amalgam restorations increases the risk of

- 1. cracks in the teeth.
  - 2. pulp exposures.
  - 3. thermal sensitivity.
  - 4. periodontal ligament invasion.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In pin-retained restorations, the pin holes should be parallel to the

- A. long axis of the tooth.
- B. nearest external surface.
- C. pulp chamber.
- D. axial wall.

What is the most important factor to consider when deciding whether or not to use pulp protection?

- A. depth of the pulpal floor.
- B. thickness of the remaining dentin.
- C. amount of carious material removed.
- D. location of the carious lesion.

Enlargement of the thyroid gland can be caused by

- A. insufficient fluoride.
- B. excess iodine.
- C. insufficient iodine.
- D. excess calcium.
- E. excess sodium.

The principal reason for a cavosurface bevel on an inlay preparation is to

- A. remove undermined enamel.
- B. improve marginal adaptation.
- C. decrease marginal percolation.
- D. increase resistance and retention forms.

Which of the following conditions is characterized by abnormally large pulp chambers?

- A. Amelogenesis imperfecta.
- B. Regional odontodysplasia.
- C. Dentinogenesis imperfecta.
- D. Dentinal dysplasia Type I.

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Which of the following has the highest rate of recurrence?

- A. Odontogenic keratocyst.
- B. Nasoalveolar cyst.
- C. Median palatal cyst.
- D. Incisive canal cyst.

Which of the following is the most frequent cause of ankylosis of the temporomandibular joint?

- A. Intra-articular injection of steroids.
- B. Chronic subluxation.
- C. Trauma.
- D. Anterior disc dislocation.

The most likely origin of a metastatic carcinoma of the mandible is a primary lesion of the

- 1. lung.
- 2. breast.
- 3. prostate.
- 4. nasopharynx.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Hyperplastic lingual tonsils may resemble which of the following?

- A. Epulis fissuratum.
- B. Lingual varicosities.
- C. Squamous cell carcinoma.
- D. Median rhomboid glossitis.
- E. Prominent fungiform papillae.

In the bisecting angle principle of intraoral radiography, the radiopacity that can obliterate the apices of maxillary molars is the

- A. maxillary sinus.
- B. palatine bone and the zygoma.
- C. orbital process of the zygomatic bone.
- D. zygoma and the zygomatic process of the maxilla.

Radiographically, the lamina dura is a

- A. thick layer of bone forming the inner surface of the alveolus.
- B. thin radiolucent line around the roots of the teeth.
- C. thick layer of cortical bone.
- D. thin radiopaque line around the roots of the teeth.

The anatomical landmarks used to help establish the location of the posterior palatal seal of a maxillary complete denture include the

- A. pterygomaxillary notches and the fovea palatinae.
- B. pterygomaxillary notches and the posterior nasal spine.
- C. posterior border of the tuberosities and the posterior border of the palatine bone.
- D. anterior border of the tuberosities, the palatine raphe and the posterior border of the palatine bone.

Irreversible hydrocolloid materials are best removed from the mouth by

- A. a quick snap.
- B. a slow teasing motion.
- C. twisting and rocking.
- D. having the patient create a positive pressure.

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To improve denture stability, mandibular molar teeth should normally be placed

- A. over the crest of the mandibular ridge.
- B. buccal to the crest of the mandibular ridge.
- C. over the buccal shelf area.
- D. lingual to the crest of the mandibular ridge.

Upon setting, a mixture of plaster of Paris and water will exhibit

- A. loss in compressive strength.
- B. expansion.
- C. gain in moisture content.
- D. contraction.

High copper amalgam alloys are superior to conventional alloys in that they have

- 1. lower creep.
  - 2. less corrosion.
  - 3. less marginal breakdown.
  - 4. higher 1 hour compressive strength.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Extreme resorption of an edentulous mandible can bring the alveolar ridge to the level of the attachment of the

- A. buccinator, styloglossus and geniohyoid muscles.
- B. mylohyoid, buccinator and styloglossus muscles.
- C. superior constrictor, mylohyoid and buccinator muscles.
- D. mylohyoid, buccinator and genioglossus muscles.

The absence of a pulp chamber in a deciduous maxillary incisor is most likely due to

- A. amelogenesis imperfecta.
- B. hypophosphatasia.
- C. trauma.
- D. ectodermal dysplasia.
- E. cleidocranial dysostosis.

In patients with cleft palates there may be

- A. an increase in supernumerary teeth.
- B. an increase in congenitally missing teeth.
- C. a higher incidence of crown defects.
- D. All of the above.

Before performing surgery on a patient who is taking warfarin, which of the following should be evaluated?

- A. Bleeding time.
- B. Clotting time.
- C. Prothrombin time.
- D. Coagulation time.

Which of the following statements is correct?

- A. Epithelial cells are united to the basal lamina by hemidesmosomes.
- B. The basal lamina is divided into lamina lucida and lamina densa.
- C. The basal lamina is a product of epithelial cells.
- D. All of the above.

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Normal sulcular epithelium in man is

1. nonkeratinized.
  2. squamous.
  3. stratified.
  4. nonpermeable.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The arrangement and character of the principal fibres of the periodontal ligament are modified by

- A. tooth morphology.
- B. occlusal function.
- C. cementum.
- D. alveolar bone.

Hypoglycemia is characterized by

1. mental confusion.
  2. tachycardia.
  3. sweating.
  4. nausea.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Juvenile periodontitis

- A. is associated with gram-negative anaerobic flora.
- B. is associated with gram-positive anaerobic flora.
- C. is associated with root caries.
- D. has a definite predilection toward males.

Gingival inflammation may result from

- A. trauma.
- B. chemical irritation.
- C. plaque.
- D. All of the above.

Endotoxin is

- A. a cell wall component of gram-negative bacteria.
- B. a potent inflammatory agent.
- C. present in diseased root cementum.
- D. All of the above.

A 70-year old female has consumed optimal levels of fluorides all her life. You would expect to find a decreased incidence of

1. Paget's disease of bone.
  2. osteoporosis.
  3. hyperparathyroidism.
  4. dental caries.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The lowest level of fluoride in drinking water which will cause enamel mottling is

- A. 0.5ppm.
- B. 1.0ppm.
- C. 3.0ppm.
- D. 5.0ppm.

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Amphetamines

1. increase mental alertness and decrease fatigue.
  2. are analeptics.
  3. have no effect on psychomotor activity.
  4. are useful in controlling arrhythmias.
- A. (1) and (3)  
B. (2) and (4)  
C. (4) only  
D. All of the above.

Which of the following has/have analgesic, antipyretic and anti-inflammatory effects?

- A. Acetaminophen.  
B. Acetylsalicylic acid.  
C. Bradykinin.  
D. A. and B.  
E. None of the above.

Which of the following is most often associated with a non-vital tooth?

- A. Periapical cyst.  
B. Internal resorption.  
C. Periapical cementoma.  
D. Hyperplastic pulpitis.

The depth of penetration of any object by x-rays is determined by

1. milliamperage.
  2. density of the object.
  3. exposure time.
  4. kilovoltage.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following will increase image sharpness on radiographs?

- A. Small focal spot.  
B. Long source-film distance.  
C. Short object-film distance.  
D. All of the above.

Filters are placed in the path of the x-ray beam to

- A. increase contrast.  
B. reduce film density.  
C. reduce exposure time.  
D. reduce patient radiation dose.

The amount of radiation to a patient can be reduced by

1. using a high speed film.
  2. using an aluminum filter.
  3. using low kVp.
  4. increasing target-film distance.
  5. decreasing target-film distance.
- A. (1) (2) (3) (4)  
B. (1) (2) (4)  
C. (1) (3) (5)  
D. (2) (3) (4)  
E. (2) (3) (5)

If an alginate impression must be stored for a few minutes before the cast is poured, it should be placed in

- A. water.  
B. 100% relative humidity.  
C. A 1% aqueous calcium sulfate solution.  
D. None of the above.

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Particulate hydroxyapatite, when placed subperiostially,

1. is highly biocompatible.
  2. has a low incidence of secondary infection following surgery.
  3. has a tendency to migrate following insertion.
  4. induces bone formation throughout the implanted material.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

World epidemiological data indicates that periodontal disease is the most likely cause of tooth loss in the following age group:

- A. 10 - 20 years.  
B. 20 - 30 years.  
C. 30 - 50 years.  
D. 65 - 75 years.  
E. over 75 years.

Prognosis for a patient with oral squamous cell carcinoma depends upon which of the following factors?

1. Size of the tumor.
  2. Location of the tumor.
  3. Lymph node involvement.
  4. Symptoms.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Desquamative gingivitis is seen in

1. pemphigus vulgaris.
  2. mucous membrane pemphigoid.
  3. erosive lichen planus.
  4. erythema multiforme.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A characteristic sign of aggressive periodontitis in an adolescent (juvenile periodontitis) is

- A. marginal gingivitis.  
B. painful, burning gingivae.  
C. hyperplastic gingivitis.  
D. drifting of the teeth.

To ensure maximum marginal strength for an amalgam restoration the cavosurface angle should

- A. approach 45 degrees.  
B. approach 90 degrees.  
C. be bevelled.  
D. be chamfered.

Whenever possible, the margins of a restoration should be placed

1. subgingivally.
  2. supragingivally.
  3. on cementum.
  4. on enamel.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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A bevel is CONTRAINDICATED on the cavosurface margins of a Class I amalgam cavity preparation because

- A. this type of margin would tend to leak.
- B. as the tooth undergoes natural attrition, the bevel would be worn away.
- C. a thin flange of the amalgam restorative material is prone to fracture.
- D. the restoration is more difficult to polish.

Planing the enamel at the gingival cavosurface of a Class II amalgam preparation on a permanent tooth

- A. should result in a long bevel.
- B. is contraindicated because of the low edge strength of amalgam.
- C. is unnecessary since the tooth structure in this area is strong.
- D. should remove unsupported enamel which may fracture.
- E. should result in a sharp gingivoproximal line angle.

Which of the following is/are (a) useful guide(s) in determining a patient's occlusal vertical dimension?

- 1. Appearance.
- 2. Phonetics.
- 3. Observation of the rest position.
- 4. Pre-extraction profile records.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

The retention form of a full crown preparation can be improved by

- 1. reducing its taper.
- 2. increasing its length.
- 3. utilizing grooves or boxes.
- 4. polishing the preparation.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In partial denture design, the major connector should

- A. rigidly connect the bilateral components.
- B. act as a stress-breaker.
- C. not interfere with lateral forces.
- D. dissipate vertical forces.

A patient with complete dentures complains of clicking. The most common causes are

- A. reduced vertical dimension and improperly balanced occlusion.
- B. excessive vertical dimension and poor retention.
- C. use of too large a posterior tooth and too little horizontal overlap.
- D. improper relation of teeth to the ridge and excessive anterior vertical overlap.

In patients wearing complete dentures, the most frequent cause of tooth contact (clicking) during speaking is

- A. nervous tension.
- B. incorrect centric relation position.
- C. excessive occlusal vertical dimension.
- D. lack of vertical overlap.
- E. unbalanced occlusion.

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The best means of extending the working time of an irreversible hydrocolloid impression material is to

- A. extend spatulation time.
- B. add additional water.
- C. use cold water.
- D. add a small amount of borax.
- E. add potassium sulfate.

The use of complete dentures by older people most frequently causes

- 1. denture induced hyperplasia.
- 2. alveolar ridge resorption.
- 3. angular cheilitis.
- 4. stomatitis.
- 5. leukoplakia.

- A. (1) (4) (5)
- B. (2) (3) (5)
- C. (1) (2) (3) (4)
- D. All of the above.

Side effects of chemotherapeutic treatment for malignancy include

- A. atrophic thinning of the oral mucosa.
- B. ulceration.
- C. necrosis.
- D. spontaneous bleeding.
- E. All of the above.

The surgical procedure indicated for odontogenic cysts is

- A. enucleation.
- B. cauterization.
- C. incision and drainage.

The most appropriate oral drugs for control of anxiety in a dental patient are

- A. benzodiazepines.
- B. phenothiazines.
- C. barbiturates.
- D. tricyclic antidepressants.

In an infection caused by non-penicillinase producing staphylococcus, the drug of choice is

- A. penicillin V.
- B. cephalexin.
- C. tetracycline.
- D. vancomycin.

Intravenous administration of epinephrine results in

- 1. increased systolic pressure.
- 2. increased heart rate.
- 3. palpitations.
- 4. respiratory depression.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Antibiotic prophylaxis is recommended for patients with which of the following?

- 1. Mitral valve prolapse with regurgitation.
- 2. Cardiac pacemaker.
- 3. Prosthetic heart valves.
- 4. All heart murmurs.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Water irrigation devices have been shown to

- A. eliminate plaque.
- B. dislodge food particles from between teeth.
- C. disinfect pockets for up to 18 hours.
- D. prevent calculus formation.

Clinical examination of a 15 year old girl shows permanent central incisors, permanent canines and primary canines all in contact and anterior to the premolars. The most likely cause is

- A. ankylosed permanent canines.
- B. ankylosed primary canines.
- C. impacted permanent lateral incisors.
- D. congenitally missing permanent lateral incisors.

Cephalometrics is used in orthodontics to

- A. treat malocclusions.
- B. study growth changes.
- C. aid in diagnosis and case analysis.
- D. B. and C.
- E. All of the above.

Cephalometrics is useful in assessing which of the following relationships?

- A. Tooth-to-tooth.
- B. Bone-to-bone.
- C. Tooth-to-bone.
- D. All of the above.

The undesirable side-effect most commonly associated with use of a finger spring to tip the crown of an anterior permanent tooth is

- A. pain.
- B. gingival irritation.
- C. tendency for the tooth to intrude.
- D. severe mobility of the tooth.

Forces for orthodontic tooth movement ideally should be

- 1. intermittent.
  - 2. continuous.
  - 3. heavy.
  - 4. light.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following is the LEAST likely primary site for the development of oral squamous cell carcinoma in the elderly?

- A. Dorsum of the tongue.
- B. Floor of the mouth.
- C. Lateral border of the tongue.
- D. Tonsillar fossa.

A surgical flap not repositioned over a bony base will result in

- 1. slower healing.
  - 2. foreign body inflammatory reaction.
  - 3. wound dehiscence.
  - 4. necrosis of bone.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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### Benign neoplasms

1. grow slowly.
  2. are generally painless.
  3. can be managed conservatively.
  4. can metastasize.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A removable orthodontic appliance, producing a light force on the labial of a proclined maxillary central incisor will cause

- A. lingual movement of the crown and lingual movement of the root apex.  
B. intrusion of the central incisor and lingual movement of the crown.  
C. lingual movement of the crown and labial movement of the root apex.  
D. intrusion of the central incisor.

Which of the following are mechanisms of growth of the naso-maxillary complex?

- A. Sutural.  
B. Cartilaginous.  
C. Appositional.  
D. All of the above.

### The epithelial attachment

- A. in health, is located at the cemento-enamel junction.  
B. with periodontitis, moves apically along the root surface as periodontal disease progresses.  
C. is composed of stratified squamous non-keratinized epithelium.  
D. All of the above.

### Wolff's Law states that bone elements

- A. rearrange themselves in the direction of functional pressures.  
B. increase their mass to reflect functional stress.  
C. decrease their mass to reflect functional stress.  
D. All of the above.

The inflammatory response in periodontal pathology is caused by bacterial products from plaque which

1. act as chemotactic products.
  2. activate the kallikrein system.
  3. initiate an immune response.
  4. act as enzymes.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Attached gingival tissue is primarily composed of

- A. collagenous fibres.  
B. keratinized squamous epithelium.  
C. elastic fibres.  
D. A. and B.  
E. A., B. and C.

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Excessively dark radiographs will result from

1. underdevelopment.
  2. overexposure.
  3. backward placement of the film.
  4. excessive milliamperage.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A hardened gold alloy will exhibit

- A. less plastic deformation per unit of stress than the same alloy in a softened condition.
- B. greater plastic deformation per unit of stress than the same alloy in a softened condition.
- C. no difference in the plastic deformation per unit of stress of the alloy in hard or soft condition.

Which of the following pharmacokinetic change(s) occur(s) with aging?

1. Absorption is altered by a decrease in the gastric pH.
  2. Metabolism is decreased by a reduced liver mass.
  3. Distribution is altered by a decrease in total body fat.
  4. Excretion is reduced because of lessened renal blood flow.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following should NOT be prescribed for a patient receiving warfarin (Coumadin®)?

1. Acetylsalicylic acid.
  2. Oxycodone.
  3. Ketorolac.
  4. Codeine.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Hypercementosis at the root apex is often associated with

- A. hypothyroidism.
- B. Paget's disease.
- C. orthodontic tooth movement.
- D. normal occlusal function.
- E. hyperparathyroidism.

When using the periodontal probe to measure pocket depth, the measurement is taken from the

- A. base of the pocket to the cementoenamel junction.
- B. free gingival margin to the cementoenamel junction.
- C. base of the pocket to the crest of the free gingiva.
- D. base of the pocket to the mucogingival junction.

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Which of the following is/are common to both gingival and periodontal pockets?

1. Apical migration of junctional epithelium.
  2. Fibrotic enlargement of marginal tissue.
  3. Bleeding upon probing.
  4. Increased depth upon probing.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

In a cavity preparation which closely approximates the pulp, you would protect the pulp with

- A. a zinc phosphate cement base.  
B. a calcium hydroxide cement base.  
C. a calcium hydroxide wash and cavity varnish.  
D. a calcium hydroxide cement liner and a glass ionomer cement base.

A hinge axis facebow records

- A. Bennett angle.  
B. centric relation.  
C. lateral condylar inclination.  
D. horizontal condylar inclination.  
E. opening and closing axis of the mandible.

Compared to unfilled resins, composite resins have

1. reduced thermal dimensional changes.
  2. increased strength.
  3. reduced polymerization shrinkage.
  4. better polishability.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

After the age of 6 years, growth of the mandible is greatest

- A. at the symphysis.  
B. between canines.  
C. along the lower border.  
D. posterior to first molars.

There is a differential between girls and boys with respect to the age at which the growth velocity reaches its peak. That difference is

- A. boys six months ahead of girls.  
B. girls six months ahead of boys.  
C. girls one year ahead of boys.  
D. girls two years ahead of boys.

Excessive orthodontic force used to move a tooth may

1. cause hyalinization.
  2. cause root resorption.
  3. crush the periodontal ligament.
  4. impair tooth movement.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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The predominant type of movement produced by a finger spring on a removable appliance is

- A. torque.
- B. tipping.
- C. rotation.
- D. translation.

Recurring tooth rotations occur most frequently after orthodontic correction due to

- A. density of the cortical bone.
- B. persistence of tongue and finger habits.
- C. free gingival and transseptal fibres.
- D. oblique fibres of the periodontal ligament.

Following loss of a permanent mandibular first molar at age 8, which of the following changes are likely to occur?

- 1. Distal drift of second premolar.
  - 2. No movement of second premolar.
  - 3. Mesial drift of second permanent molar.
  - 4. No movement of second permanent molar.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following conditions can make an older patient short of breath on mild exertion?

- 1. Anemia.
  - 2. Cardiac failure.
  - 3. Obesity.
  - 4. Osteoarthritis.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The best space maintainer to prevent the lingual collapse that often occurs following the early loss of a mandibular primary canine is a

- A. Nance expansion arch.
- B. lingual arch.
- C. band and loop space maintainer.
- D. distal shoe space maintainer.

Which of the following drug groups can cause xerostomia?

- 1. Diuretics.
  - 2. Antibiotics.
  - 3. Antidepressants.
  - 4. Non-steroidal anti-inflammatory agents.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Mouth breathing is most commonly associated with Angle's malocclusion Class

- A. I.
- B. II, Division 1.
- C. II, Division 2.
- D. III.
- E. None of the above.

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The design of a mucoperiosteal flap should

1. provide for visual access.
  2. provide for instrument access.
  3. permit repositioning over a solid bone base.
  4. be semilunar in shape.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

In the surgical removal of an impacted mandibular third molar, which of the following would be considered to be the most difficult?

- A. Mesio-angular.  
B. Horizontal.  
C. Vertical.  
D. Disto-angular.

An alveoplasty is performed to

1. facilitate removal of teeth.
  2. correct irregularities of alveolar ridges following tooth removal.
  3. prepare the residual ridge for dentures.
- A. (1) and (2)  
B. (1) and (3)  
C. (2) and (3)  
D. All of the above.

Which of the following is/are essential when using spherical rather than admix alloy for a routine amalgam restoration

1. a larger diameter condenser.
  2. an anatomical wedge.
  3. decreased condensing pressure.
  4. a dead soft matrix band.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following constituents of a local anesthetic cartridge is most likely to be allergenic?

- A. Lidocaine.  
B. Epinephrine.  
C. Metabisulfite.  
D. Hydrochloric acid.

Which one of the following describes the position of the needle tip during administration of local anesthetic for the inferior alveolar nerve block?

- A. Anterior to the pterygomandibular raphe.  
B. Medial to the medial pterygoid muscle.  
C. Superior to the lateral pterygoid muscle.  
D. Lateral to the sphenomandibular ligament.

Aspiration is carried out prior to a local anaesthetic injection in order to reduce the

- A. toxicity of local anaesthetic.  
B. toxicity of vasoconstrictor.  
C. possibility of intravascular administration.  
D. possibility of paraesthesia.

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The tooth preparation for a porcelain veneer must create a/an

- A. rough surface for improved bonding.
- B. space for an appropriate thickness of the veneering material.
- C. margin well below the gingival crest.
- D. definite finish line.

The dimensional stability of polyether impression material is considered to be good EXCEPT if the material is

- A. dehydrated.
- B. allowed to absorb water after setting.
- C. used in uneven thickness.
- D. distorted by rapid removal of the impression from the mouth.
- E. contaminated with latex.

Which of the following affect(s) polymerization of visible light cured composite resins?

- 1. Intensity of the light source.
- 2. Thickness of composite resin.
- 3. Proximity of light source.
- 4. Shade of composite resin.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Resin bonding of composites to acid-etched enamel results in

- A. decreased polymerization shrinkage of the resin.
- B. decreased crack formation in the enamel.
- C. reduced microleakage.
- D. elimination of post-operative sensitivity.
- E. improved wear resistance of the composite.

In order to achieve a proper interproximal contact when using a spherical alloy, which of the following is/are essential?

- 1. A larger sized condenser.
- 2. A thinner matrix band.
- 3. An anatomical wedge.
- 4. Use of mechanical condensation.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following cements can chemically bond to enamel?

- 1. Zinc phosphate cement.
- 2. Polycarboxylate cement.
- 3. Ethoxy benzoic acid cement.
- 4. Glass ionomer cement.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Twenty-four hours after placement of a Class II amalgam restoration, a patient returns complaining of discomfort when "biting". There are no other symptoms. It is most likely that the

- A. pulp was exposed.
- B. restoration is leaking.
- C. restoration is in supraocclusion.
- D. amount of base material is inadequate.

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The "smear layer" is an important consideration in

- A. plaque accumulation.
- B. caries removal.
- C. pulp regeneration.
- D. dentin bonding.

A 22 year old presents with a fracture of the incisal third of tooth 2.1 exposing a small amount of dentin. The fracture occurred one hour previously. There is no mobility of the tooth but the patient complains that it is rough and sensitive to cold. The most appropriate emergency treatment is to

- A. open the pulp chamber, clean the canal and temporarily close with zinc oxide and eugenol.
- B. smooth the surrounding enamel and apply glass ionomer cement.
- C. smooth the surrounding enamel and apply a calcium hydroxide cement.
- D. place a provisional (temporary) crown.

Zinc phosphate cement, when used as a luting agent for cast restorations, has which of the following properties?

- 1. Insolubility.
- 2. Anticariogenicity.
- 3. Chemical adhesion.
- 4. Mechanical retention.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

To achieve optimum strength and esthetics, a porcelain fused to metal restoration with a porcelain butt joint margin requires a

- 1. 0.8 - 1.2mm shoulder.
- 2. sharp, well defined axiokingival line angle.
- 3. 90° - 100° cavosurface margin.
- 4. finish line that is 2mm subgingival.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

As a dentist in Canada, it is ethical to refuse to treat a patient on the basis of

- 1. religious beliefs.
- 2. physical handicap.
- 3. infectious disease.
- 4. recognition of lack of skill or knowledge.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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According to the principles of ethics that are generally accepted in Canada, a dentist may refuse to treat a patient with HIV infection for a specific procedure for the following reason(s).

1. Inadequate experience in the specific procedure.
  2. Inadequate knowledge of the specific procedure.
  3. Lack of instruments or equipment for this procedure.
  4. Infection control procedures that are not designed for infectious patients.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following systemic diseases does/do NOT predispose a patient to periodontitis?

1. Cyclic neutropenia.
  2. Diabetes mellitus.
  3. Acquired immunodeficiency syndrome.
  4. Hereditary hypohydrotic ectodermal dysplasia.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A lateral cephalometric radiograph for a patient with a 3mm anterior functional shift should be taken with the patient in

- A. maximum intercuspatation.  
B. initial contact.  
C. normal rest position.  
D. maximum opening.  
E. protrusive position.

The features of aggressive (rapidly progressive) periodontitis are

1. rapid attachment loss.
  2. suspected periodontal microbial pathogens.
  3. onset before the age of 35.
  4. ulcerations of the gingiva.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Aphthous ulcers are characterized by

1. pain.
  2. pseudomembranes.
  3. inflammation.
  4. vesicle formation.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A patient wants all his remaining teeth extracted and dentures fabricated. He has carious lesions involving the dentin on all remaining teeth. The periodontium is sound. The most appropriate management is to

1. respect the patient's decision.
  2. advise the patient to consult a specialist.
  3. discuss all of the appropriate treatment options.
  4. refuse to refer or to treat this patient since it is unethical.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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Which articular disease most often accompanies Sjögren's syndrome?

- A. Suppurative arthritis.
- B. Rheumatoid arthritis.
- C. Degenerative arthrosis.
- D. Psoriatic arthritis.
- E. Lupus arthritis.

Melanoma differs from physiologic pigmentation because it

- A. is macular.
- B. contains melanin.
- C. affects the gingiva.
- D. changes clinically.

Benign (reactive) lymphoid hyperplasia of cervical lymph nodes is typically

- A. tender, fixed.
- B. tender, mobile.
- C. nontender, fixed.
- D. nontender, matted.

Dentigerous cysts are usually found

- A. periapically.
- B. pericoronally.
- C. interradicularly.
- D. mid-root.

It is ethical to replace amalgam restorations

- 1. on request from an informed patient.
- 2. to relieve symptoms of multiple sclerosis.
- 3. in highly esthetic areas of the mouth.
- 4. to eliminate toxins from the patient.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A healthy 78 year old patient presents with three new carious lesions on root surfaces. This is most likely the result of

- A. age related changes in cementum composition.
- B. the architecture at the CEJ.
- C. age related decrease in salivary flow.
- D. changes in dietary pattern.
- E. chronic periodontal disease.

A patient with a tumor in the right infratemporal fossa shows a significant shift of the mandible to the right when opening. Which nerve is involved?

- A. Facial nerve VII.
- B. Glossopharyngeal nerve IX.
- C. Trigeminal nerve V.
- D. Hypoglossal nerve XII.

Which two muscles are involved in sucking?

- A. Caninus and depressor angularis.
- B. Risorius and buccinator.
- C. Buccinator and orbicularis oris.
- D. Levator labii superioris and zygomaticus major.

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Following root planing, a patient experiences thermal sensitivity. This pain is associated with which of the following?

- A. Golgi receptor.
- B. Free nerve endings.
- C. Odontoblastic processes.
- D. Cementoblasts.

A 45 year old, overweight man reports that his wife complains that he snores. The initial management of the patient's snoring problem is to

- A. fabricate an appliance to reduce snoring.
- B. fabricate restorations to increase the patient's vertical dimension of occlusion.
- C. refer for an orthognathic surgery consultation.
- D. refer for a sleep assessment.

The most appropriate treatment of necrotizing ulcerative periodontitis (NUP) in a patient with no fever and no lymphadenopathy is

- 1. periodontal debridement.
  - 2. antibiotic therapy.
  - 3. oral hygiene instruction.
  - 4. topical steroid therapy.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In periodontal therapy, "guided tissue regeneration" is most successful in treating

- 1. horizontal bone loss.
- 2. a 3-walled infrabony defect.
- 3. a mandibular Class III furcation involvement.
- 4. a mandibular Class II furcation involvement.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

The most likely cause of tooth loss following a tunneling procedure to provide complete access for a mandibular Class III furcation involvement is

- A. root caries.
- B. root sensitivity.
- C. pulpal involvement.
- D. recurrent pocketing.

The most common clinical characteristic/s of a buccolingual functional crossbite is/are

- 1. mandibular shift from initial contact to maximum intercuspation.
- 2. asymmetrical arches.
- 3. midline deviation.
- 4. several missing teeth.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Which of the following cells are involved in an immune response to plaque in the periodontal pocket?

1. Macrophages.
  2. Plasma cells.
  3. Lymphocytes.
  4. Neutrophils.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Gingival connective tissue fibres are primarily composed of

- A. collagen.  
B. reticulin.  
C. elastin.  
D. oxytalin.

The predominant organism(s) associated with chronic (adult) periodontitis is/are

1. Prevotella intermedia.
  2. Pseudomonas aeruginosa.
  3. Porphyromonas gingivalis.
  4. Helicobacter pylori.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Eliminating periodontal pockets by gingivectomy results in

- A. healing by primary intention.  
B. adequate access to correct irregular osseous contours.  
C. retention of all or most of the attached gingiva.  
D. healing by secondary intention.

For an otherwise healthy patient, with an acute localized periodontal abscess, initial treatment must include

- A. scaling and root planing.  
B. occlusal adjustment.  
C. prescription of an antibiotic.  
D. prescription of an analgesic.

On bite-wing radiographs of adults under the age of 30, the normal alveolar crest is

- A. at the cemento enamel junction.  
B. 1-2mm apical to the cemento enamel junction.  
C. 3-4mm apical to the cemento enamel junction.  
D. not clearly distinguishable.

Continued smoking will impair wound healing following a surgical procedure because of

- A. stain development.  
B. increased rate of plaque formation.  
C. increased rate of calculus formation.  
D. contraction of peripheral blood vessels.  
E. superficial irritation to tissues by smoke.

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Chewing “automatism” is dependent on which mechanism?

- A. Reflexes between jaw closing and opening muscles.
- B. Swallowing and respiration neuronal activity.
- C. Periodontal receptor stimulation.
- D. Reticular formation neuronal activity.

A 23 year old female complains of bilateral stiffness and soreness in the preauricular region. Her symptoms have been present for the past week and are most pronounced in the morning. The most likely cause is

- A. fibrous ankylosis of the temporomandibular joints.
- B. nocturnal bruxism.
- C. early osteoarthritis.
- D. mandibular subluxation.

What percentage of 5 - 17 year olds in North America are caries free?

- A. 15 - 25
- B. 30 - 45
- C. 50 - 60
- D. 65 - 75

Which of the following statements applies to the submandibular lymph nodes?

- 1. They discharge into the internal jugular nodes.
- 2. When draining an area of acute infection, they are enlarged, nontender, soft, well defined and movable.
- 3. They are found medially to the mandible.
- 4. They drain the anterior palatine pillar, soft palate, posterior third of the tongue.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

In its classic form, serial extraction is best applied to patients with Class I occlusions with crowding of

- A. less than 10mm in each of the upper and lower arches and 35% overbite.
- B. 10mm or more in each of the upper and lower arches and 35% overbite.
- C. less than 10mm in each of the upper and lower arches and 70% overbite.
- D. 10mm or more in each of the upper and lower arches and 70% overbite.

The best time to begin interceptive orthodontic treatment for a patient with a skeletal Class II malocclusion is

- A. as soon as the malocclusion is diagnosed.
- B. immediately following complete eruption of the deciduous dentition.
- C. immediately following complete eruption of the first permanent molars.
- D. several months prior to the pre-pubertal growth spurt.
- E. after skeletal maturity.

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The maxillary cast partial denture major connector design with the greatest potential to cause speech problems is

- A. a thick narrow major connector.
- B. an anterior and a posterior bar.
- C. a thin broad palatal strap.
- D. narrow horseshoe shaped.

A direct or indirect pulp cap has the greatest chance of clinical success when there is a

- A. history of spontaneous pain.
- B. prolonged response to cold stimulus.
- C. apical lesion.
- D. vital pulp.

The layer of intermingled collagen and resin located beneath a restoration is called the

- A. smear layer.
- B. hybrid layer.
- C. Weil layer.
- D. decalcification layer.

Which of the following structures lies inferior to the mylohyoid muscle at the level of the mandibular second molar?

- A. Lingual artery.
- B. Lingual vein.
- C. Lingual nerve.
- D. Submandibular duct.

The presurgical assessment of a permanent maxillary first molar reveals roots which are trifurcated and widely divergent. The maxillary antrum encroaches into the area of trifurcation. Which of the following should be done during extraction of this tooth?

- 1. Reflect a flap.
  - 2. Reduce the palatal bone to the level of the trifurcation.
  - 3. Reduce the buccal bone to the level of the trifurcation.
  - 4. Amputate the crown and section the roots.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

If a patient loses a permanent maxillary first molar before the age of 11, the

- 1. premolar drifts distally.
  - 2. maxillary second molar erupts and moves mesially.
  - 3. opposing tooth erupts into the space created.
  - 4. overbite increases.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following phases in the setting reaction of dental amalgam is weak and corrosion-prone?

- A.  $\alpha_1$ .
- B.  $\alpha_2$ .
- C.  $\gamma$ .
- D.  $\gamma_1$ .
- E.  $\gamma_2$ .

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Which of the following impression materials has the best dimensional stability?

- A. Polysulfide rubber.
- B. Condensation silicone.
- C. Polyvinylsiloxane.
- D. Irreversible hydrocolloid.

Which one of the following is NOT a contraindication to ibuprofen?

- A. Concurrent use of alcohol.
- B. Asthmatic reaction to acetylsalicylic acid.
- C. An allergy to acetaminophen.
- D. A gastric ulcer.

Which of the following is most likely to be a squamous cell carcinoma?

- A. Sore shallow ulcer, present for a few days.
- B. Burning red plaque, present for several weeks.
- C. Asymptomatic gray macule, present for several months.
- D. Occasionally tender normal coloured nodule, present for several years.

The major advantage of glass ionomer cement as a restorative material is that it is

- A. highly translucent.
- B. a fluoride releasing material.
- C. highly esthetic.
- D. unaffected by moisture during the setting reaction.

After placement of the rubber dam you notice that the interdental papilla is protruding from beneath the rubber dam. The reason for this is that

- A. a rubber dam frame was used.
- B. the holes were placed too far apart.
- C. a light weight dam was used.
- D. the holes were placed too close together.
- E. the teeth were not individually ligated.

Which of the following mucosae is normally keratinized?

- A. Soft palate.
- B. Hard palate.
- C. Lateral tongue.
- D. Ventral tongue.

Periapical cemental dysplasia is

- A. painful.
- B. expansile.
- C. associated with vital teeth.
- D. premalignant.

The collagen fibres of the periodontal ligament that insert into bone are called

- A. Müller's fibres.
- B. reticular fibres.
- C. Sharpey's fibres.
- D. oxytalan fibres.

A laboratory-fabricated composite resin inlay compared to a direct composite resin restoration has increased

- A. colour stability.
- B. surface smoothness.
- C. control of polymerization shrinkage.
- D. bondability to tooth structure.

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Oral signs and/or symptoms of advanced vitamin C deficiency include

1. pain.
  2. angular cheilitis.
  3. spontaneous hemorrhage of the gingiva.
  4. xerostomia.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Following root canal therapy, the most desirable form of tissue response at the apical foramen is

- A. cementum deposition.
- B. connective tissue capsule formation.
- C. epithelium proliferation from the periodontal ligament.
- D. dentin deposition.

Which of the following is NOT associated with Cushing's disease?

- A. Buffalo hump.
- B. Osteoporosis.
- C. Hirsutism.
- D. Hypertension.
- E. Diabetes insipidus.

While the teeth are set in wax, dentures are tried in to

- A. verify the maxillomandibular records.
- B. verify the vertical dimension of occlusion.
- C. evaluate esthetics.
- D. All of the above.

The micro-organisms of dental caries are

1. *Streptococcus mutans*.
  2. *Staphylococcus aureus*.
  3. *Lactobacillus acidophilus*.
  4.  $\beta$ -hemolytic streptococci.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Fibrous dysplasia of the jaws

- A. is of known etiology.
- B. is premalignant.
- C. has monostotic and polyostotic forms.
- D. begins in the fifth decade.
- E. is bilaterally symmetrical.

A fistula found in association with a non-vital tooth should be

1. cauterized to remove the epithelium.
  2. traced to source with a gutta-percha point on a radiograph.
  3. treated with combined surgical and nonsurgical root canal therapy.
  4. treated with nonsurgical root canal therapy.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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The most appropriate treatment of a true combined endodontic-periodontal lesion is

- A. periodontal surgical therapy only.
- B. nonsurgical root canal therapy only.
- C. periodontal surgical therapy before non-surgical endodontic treatment.
- D. nonsurgical root canal therapy before periodontal therapy.

The current recommended regimen of antibiotic prophylaxis for a patient with a prosthetic heart valve and an allergy to penicillin is

- A. amoxicillin 3g orally one hour before procedure; then 1.5g six hours after initial dose.
- B. amoxicillin 2g orally one hour before procedure only.
- C. clindamycin 300mg orally one hour before procedure; then 150mg six hours after initial dose.
- D. clindamycin 600mg orally one hour before procedure only.
- E. erythromycin stearate, 2g orally two hours before procedure only.

The primary objective of periodontal debridement is removal of

- A. calculus.
- B. plaque.
- C. cementum.
- D. dentin.

Which one of the following luting agents has been shown to reduce the incidence of fracture in an all-ceramic restoration?

- A. Resin modified glass ionomer cement.
- B. Zinc phosphate cement.
- C. Composite resin cement.
- D. Glass ionomer cement.

A 52 year old patient presents with a limitation of mouth opening. The patient has loss of attached gingiva and multiple areas of gingival recession. A panoramic radiograph shows diffuse widening of the periodontal ligament. The most likely diagnosis is

- A. scleroderma.
- B. hyperparathyroidism.
- C. cicatricial pemphigoid.
- D. erythema multiforme.
- E. advanced adult periodontitis.

A patient complains of irritability, fatigue and weakness. She is losing weight and has diarrhea. The clinical examination shows diffuse brown macular pigmentation of the oral mucosa. The pigmentation appeared recently. The most likely diagnosis is

- A. iron deficiency anemia.
- B. Addison's disease.
- C. acute myeloid leukemia.
- D. Crohn's disease.

Which of the following dental procedures could be performed with minimal risk for a 35-year old patient with a severe bleeding disorder?

- A. Mandibular block anesthesia.
- B. Supragingival calculus removal.
- C. Incisional biopsy.
- D. Subgingival restoration.

Enamel hypoplasia, blunted roots and abnormal dentin are indicative of

- A. hyperparathyroidism.
- B. hyperthyroidism.
- C. hypoparathyroidism.
- D. hypothyroidism.

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Which of the following presents with high serum calcium levels, thinning of cortical bone and giant cell osteoclasts in the jaw and drifting teeth?

- A. Hyperthyroidism.
- B. Hyperparathyroidism.
- C. Hypothyroidism.
- D. Hypoparathyroidism.

The pain associated with pulpitis often disappears when a patient visits a dental office. This occurs due to which of the following events?

- A. Stress-induced sympathetic activity inhibits pulpal sensory fibres that cause pain.
- B. Stress-induced sympathetic activity causes vasodilatation of pulpal blood vessels.
- C. Local mediators of pulpal pain are not released when a stress-induced rise in blood pressure occurs.
- D. Pulpal pain receptors undergo fatigue.

A patient has a displaced right subcondylar fracture of the mandible. On opening, the mandible deflects to the right. Which muscle is prevented from functioning appropriately?

- A. Medial pterygoid.
- B. Temporalis.
- C. Masseter.
- D. Lateral pterygoid.

The most prevalent inflammatory cells found in gingival tissue 24 hours following flap surgery are

- A. monocytes.
- B. macrophages.
- C. lymphocytes.
- D. polymorphonuclear leukocytes.

An 8 year old patient with all primary molars still present exhibits a cusp-to-cusp relationship of permanent maxillary and mandibular first molars and good alignment of the lower incisors. The management of this patient should be to

- A. refer for orthodontic consultation.
- B. use a cervical headgear to reposition maxillary molars.
- C. disk the distal surfaces of primary mandibular second molars.
- D. place patient on appropriate recall schedule.

A smooth, elevated, red patch devoid of filiform papillae, located in the midline of the dorsum of the tongue immediately anterior to the circumvallate papillae is indicative of

- A. benign migratory glossitis.
- B. median rhomboid glossitis.
- C. a granular cell tumor.
- D. iron deficiency anemia.
- E. a fibroma.

Which of the following “in office” preventive procedures is most practical and effective for an uncooperative 4-year old patient from a non-compliant family?

- A. Oral hygiene instruction.
- B. Dietary counseling.
- C. Fluoride varnish every six months.
- D. Fluoride supplements.
- E. Pit and fissure sealants on all primary molars.

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The risk of transmission of Hepatitis B Virus (HBV) is greater than that of Human Immunodeficiency Virus (HIV) because HBV is

1. more resistant than HIV.
2. transmissible through saliva.
3. in higher numbers in blood than HIV.
4. autoclave resistant.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

With two rescuers performing cardiopulmonary resuscitation (CPR) on an adult patient, how many external chest compressions are given per minute?

- A. 40.
- B. 60.
- C. 80.
- D. 100.

Which of the following sweeteners used in sugarless gum is most effective in preventing caries?

- A. Xylitol.
- B. Sorbitol.
- C. Mannitol.
- D. Glycerol.

Which of the following statements concerning the airway is correct?

- A. Sympathetic fibres constrict the bronchioles.
- B. The trachea is membranous posteriorly to accommodate the pulsations of the aorta.
- C. The right primary bronchus forms two secondary bronchi.
- D. An aspirated foreign body would likely fall into the right primary bronchus.

Which of the following are possible causes of Bell's Palsy?

1. Incorrect injection technique.
2. Viral infection.
3. Inflammation of the facial nerve.
4. Surgical trauma.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

During a normal chewing cycle, which of the following has/have maximum EMG activity when the teeth are in maximum intercuspation?

1. Medial pterygoid muscles.
2. Masseter muscles.
3. Lateral pterygoid muscles.
4. Digastric muscles.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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The most appropriate time to remove a supernumerary tooth that is disturbing the eruption of a permanent tooth is

- A. as soon as possible.
- B. after two thirds of the permanent root has formed.
- C. after the apex of the permanent root has closed.
- D. after the crown appears calcified radiographically.

A patient presents with hypodontia, conical teeth, fine, scanty, fair hair, and an intolerance to hot weather. The most likely diagnosis is

- A. achondroplasia.
- B. malignant hyperthermia.
- C. ectodermal dysplasia.
- D. cystic fibrosis.

Which of the following is a possible cause for a low density radiograph (light film)?

- A. Cold developer.
- B. Over exposure.
- C. Improper safety light.
- D. Excessive developing time.

Which of the following is necessary for collagen formation?

- A. Vitamin A.
- B. Vitamin C.
- C. Vitamin D.
- D. Vitamin E.
- E. Vitamin K.

Overlapping contacts on a bitewing radiograph result from

- 1. malalignment of teeth.
- 2. incorrect vertical angulation of the x-ray beam.
- 3. incorrect horizontal angulation of the x-ray beam.
- 4. patient movement during the exposure.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The washing of hands must be performed before putting on and after removing gloves because it

- 1. reduces the number of skin bacteria which multiply and cause irritation.
- 2. completely eliminates skin bacteria.
- 3. minimizes the transient bacteria which could contaminate hands through small pinholes.
- 4. allows gloves to slide on easier when the hands are moist.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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The risk of latex allergy increases with a/an

1. increased exposure to latex.
  2. history of spina bifida.
  3. history of allergy to bananas, chestnuts or avocado.
  4. history of eczema.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Gingival enlargement may result from the administration of

1. nifedipine.
  2. cyclosporine.
  3. phenytoin sodium.
  4. prednisolone.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The survey of the diagnostic cast that is done as part of a removable partial denture design procedure is needed to

1. determine the path of insertion of the removable partial denture.
  2. evaluate the retention potential of the abutment teeth.
  3. evaluate the modifications needed to create parallel guiding planes.
  4. locate the height of contour abutment teeth.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The best way to protect the abutments of a Class I removable partial denture from the negative effects of the additional load applied to them is by

- A. splinting abutments with adjacent teeth.  
B. keeping a light occlusion on the distal extensions.  
C. placing distal rests on distal abutments.  
D. using cast clasps on distal abutments.  
E. regular relining of the distal extensions.

Which of the following could cause clicking sounds during speech in denture wearers?

1. A nonbalanced occlusion.
  2. An excessive occlusal vertical dimension.
  3. A reduced horizontal overlap.
  4. A lack of denture retention.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Aging pulps show a relative increase in

1. fibrous elements.
  2. cell numbers.
  3. calcification.
  4. vascularity.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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Healthy attached gingiva

- A. has no basal cell layer.
- B. is closely bound to underlying periosteum.
- C. contains elastic fibers.
- D. has no rete pegs.

The redness of inflamed gingiva is due to

- A. the degree of keratinization.
- B. subgingival deposits.
- C. increased collagen fiber density.
- D. increased vasodilation.

An unerupted supernumerary tooth between the permanent maxillary central incisors is commonly associated with which of the following clinical observations?

- A. Dental diastema.
- B. Hypertrophied labial frenum.
- C. Delayed exfoliation of primary maxillary lateral incisors.
- D. Absence of permanent maxillary lateral incisors.

After many caries free years a 78 year old patient develops multiple root surface caries. This is most likely the result of

- A. changes in cementum composition.
- B. exposure of the cemento-enamel junctions.
- C. decreased salivary flow.
- D. changes in dietary pattern.

The angle SNA can be used to evaluate the

- A. maxillary protrusion.
- B. overbite.
- C. upper incisor inclination.
- D. facial height.
- E. mandibular angle.

A fracture in an all ceramic crown may be caused by

- 1. inadequate ceramic thickness.
- 2. sharp line angles in the tooth preparation.
- 3. excessive occlusal load.
- 4. use of an inappropriate luting material.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A survey of the master cast shows that the 3.5 and 3.7 abutments for a fixed partial denture have different paths of insertion with respect to 3.7. A semi-precision attachment is chosen rather than preparing the teeth again. Where should the male part of the attachment ideally be located?

- A. Distal of the 3.5 retainer.
- B. Distal of the 3.6 pontic.
- C. Mesial of the 3.7 retainer.
- D. Mesial of the 3.6 pontic.

What is the earliest age that the diagnosis of a congenitally missing mandibular second bicuspid can be confirmed?

- A. 2 years.
- B. 4 years.
- C. 6 years.
- D. 8 years.

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A Bolton relationship has determined a

- maxillary “12” excess of 3.5mm
- maxillary “6” excess of 3.0mm

What effect(s) could this Bolton relationship have on a Class I malocclusion?

1. Deeper overbite.
2. Maxillary crowding.
3. Reduced overjet.
4. Increased overjet.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following is/are essential when using a spherical rather than an admix alloy for a routine amalgam restoration?

1. A larger diameter condenser tip.
2. An anatomical wedge.
3. A thinner matrix band.
4. A serrated condenser tip.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Corticosteroids may be used for the management of

1. allergy.
2. arthritis.
3. asthma.
4. Addison's disease.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Trauma from occlusion may

- A. initiate marginal gingivitis.
- B. affect the blood supply to gingiva.
- C. initiate periodontitis.
- D. affect the progression of periodontitis.

All of the following are well documented initiating factors of hairy tongue EXCEPT

- A. candidiasis.
- B. mouth rinses.
- C. antibiotics.
- D. systemic corticosteroids (Prednisone).
- E. radiotherapy to the head and neck.

A patient with pain, fever and unilateral parotid swelling following a general anesthetic most likely has

- A. Mumps.
- B. sialolithiasis.
- C. acute bacterial sialadenitis.
- D. Sjögren's syndrome.
- E. sarcoidosis.

Which of the following diseases may cause an enlargement of the jaws, development of diastemas and/or a poorly fitting denture?

- A. Phantom bone disease.
- B. Rickets.
- C. Paget's disease.
- D. Osteoporosis.
- E. Hypophosphatasia.

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Multiple osteomas and supernumerary teeth may be associated with

- A. Gorlin's syndrome.
- B. Rubenstein – Taybi syndrome.
- C. Gardner's syndrome.
- D. Cleidocranial dysplasia.
- E. Ectodermal dysplasia.

The test(s) diagnostic for primary hyperparathyroidism in a patient with multiple brown tumours is/are

- A. parathyroid biopsy.
- B. multiple jaw biopsies.
- C. radiographic skeletal survey.
- D. serum calcium and PTH level.
- E. creatine clearance and BUN.

All of the following are common features of a malignant neoplasm of the jaws EXCEPT

- A. moth-eaten radiolucencies.
- B. irregular radiopacities.
- C. widening of periodontal ligament spaces.
- D. well-circumscribed periapical radiolucencies.
- E. paresthesia and tooth loosening.

In general, a pigmented macule measuring 4mm in diameter should be treated by

- A. incisional biopsy.
- B. excisional biopsy.
- C. exfoliative cytology.
- D. carbon dioxide laser.
- E. electrocautery.

In mucous membrane pemphigoid, a positive Nikolsky sign is the result of a/an

- A. separation at the basement membrane.
- B. intraepithelial separation.
- C. separation of the lamina propria and submucosal.
- D. intraepithelial bulla formation.

The most likely diagnosis of a non-healing indurated ulcer on the lateral border of the tongue in a 60 year old patient is

- A. a traumatic ulcer.
- B. major aphthous ulcer.
- C. squamous cell carcinoma.
- D. a deep fungal infection.
- E. tuberculosis.

Which conditions are associated with Acquired Immunodeficiency Syndrome (AIDS)?

- 1. Acute marginal periodontitis.
  - 2. Hairy leukoplakia.
  - 3. Candidiasis.
  - 4. Geographic tongue.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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Proper collimation of the useful beam for the film size and target-film distance will reduce

1. image definition.
2. secondary radiation.
3. radiographic contrast.
4. radiation received by patient.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The primary stimulus for growth of the mandible is

1. genetic.
2. epigenetic.
3. functional.
4. environmental.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In x-ray equipment, kilovoltage controls

1. contrast.
2. speed of electrons.
3. penetrating power of radiation.
4. amount of radiation produced.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (1) and (4)
- D. (4) only
- E. All of the above.

Amalgam is condensed to

1. further break down the alloy particles.
2. force the alloy particles together.
3. complete the trituration process.
4. express excess mercury content.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The amount of radiation to a patient can be reduced by

1. using a high speed film.
2. using an aluminum filter.
3. increasing target-film distance.
4. using low kVp.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

For an acid etched Class III composite resin, the cavosurface margin of the cavity can be bevelled to

- A. eliminate the need for internal retention.
- B. improve convenience form.
- C. aid in finishing.
- D. increase the surface area for etching.

Alginate impression material

- A. is a reversible hydrocolloid.
- B. sets by condensation polymerization.
- C. is a rigid material.
- D. is an irreversible material.
- E. is a thermoplastic material.

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Alteration of the intestinal flora by some chemotherapeutic agents can interfere with reabsorption of a contraceptive steroid thus preventing the recirculation of the drug through the enterohepatic circulation. Which of the following can interfere with this mechanism?

1. Codeine.
  2. Penicillin V.
  3. Acetaminophen.
  4. Tetracycline.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The principles of closed fracture management are

1. reduction of fracture.
  2. immobilization of fracture.
  3. restoration of occlusion.
  4. incision and debridement at fracture site.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Displacement of fractures is influenced by

1. direction of the blow.
  2. muscle attachments.
  3. direction of fracture line.
  4. hemorrhage.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

In Angle's classification, a Class II, division 1 malocclusion may describe a combination of skeletal problems, such as

1. maxillary protrusion, normal mandibular position.
  2. normal maxillary position, mandibular retrusion.
  3. maxillary protrusion, mandibular retrusion.
  4. bimaxillary protrusion, with the maxilla more protrusive than the mandible.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

After initiating preventive management for a 16 year old patient with multiple extensive carious lesions, which of the following restorative treatments is most appropriate?

- A. Place amalgam restorations over the next few months.  
B. Excavate caries and place temporary restorations within the next few weeks.  
C. Delay any treatment until the hygiene improves.  
D. Restore all teeth with composite resin over the next few months.

Which of the following clinical conditions is the most serious?

- A. Acute periapical abscess of a mandibular central incisor.  
B. Middle face cellulitis.  
C. Chronic periapical abscess of a mandibular third molar.  
D. Infected dentigerous cyst.

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Root resorption of permanent teeth may be associated with

1. excessive orthodontic forces.
  2. periapical granuloma.
  3. traumatic injury.
  4. periapical osseous dysplasia (periapical cemento-osseous dysplasia).
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Xerostomia can be

1. found in the elderly.
  2. drug induced.
  3. associated with diabetes.
  4. predisposing to dental diseases.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A silane coupling agent is used to

- A. control polymerization shrinkage in composite resins.  
B. enhance the bond between a porcelain veneer and the resin cement.  
C. reduce the surface tension when investing a wax pattern.  
D. facilitate the soldering of gold castings.

In order to achieve a proper interproximal contact when using a spherical alloy, which of the following is/are essential?

1. A larger sized condenser.
  2. A thinner matrix band.
  3. A properly placed wedge.
  4. Use of mechanical condensation.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A patient with Alzheimer's dementia presents with his personal care worker. His daughter, who is his legal guardian, is unavailable. What is required to obtain informed consent for an elective invasive procedure?

- A. The patient's presence implies consent.  
B. Obtain written consent from the patient.  
C. Obtain written consent from the personal care worker.  
D. Obtain consent from the patient's daughter.

Cementicles

- A. contain pulp tissue.  
B. have the same composition as cementum.  
C. are a response to trauma.  
D. develop from excess dental follicle cells.

Hydrocolloid impressions are removed from the mouth with a snap because they exhibit

- A. syneresis.  
B. imbibition.  
C. viscoelasticity.  
D. low elastic recovery.  
E. low tear strength.

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The desirable relationship between the coefficients of thermal expansion of an alloy ( $\epsilon_{\text{metal}}$ ) and a ceramic ( $\epsilon_{\text{ceramic}}$ ) used for a metallo-ceramic restoration is

- A.  $\epsilon_{\text{metal}}$  significantly higher than  $\epsilon_{\text{ceramic}}$ .
- B.  $\epsilon_{\text{metal}}$  significantly lower than  $\epsilon_{\text{ceramic}}$ .
- C.  $\epsilon_{\text{metal}}$  equal to  $\epsilon_{\text{ceramic}}$ .
- D.  $\epsilon_{\text{metal}}$  slightly higher than  $\epsilon_{\text{ceramic}}$ .
- E.  $\epsilon_{\text{metal}}$  slightly lower than  $\epsilon_{\text{ceramic}}$ .

Zinc oxide eugenol cement is a/an

- A. phosphate cement.
- B. phenolic cement.
- C. resin modified glass ionomer cement.
- D. polyalkenoic acid cement.
- E. adhesive resin cement.

Light-cured dental composites set when exposed to light. Light is the

- A. initiator.
- B. reactor.
- C. catalyst.
- D. activator.
- E. terminator.

In alginate impression materials, sodium phosphate ( $\text{Na}_3\text{PO}_4$ ) is the

- A. reactor.
- B. catalyst.
- C. retarder.
- D. disinfectant.
- E. cross linking agent.

Xerostomia can result from

- 1. Sjögren's syndrome.
- 2. radiation therapy for oral cancer.
- 3. antidepressant drug therapy.
- 4. anticholinergics (Atropine).

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The roots of the first permanent molar should be completely formed by the age of

- A. six years.
- B. seven years.
- C. nine years.
- D. eleven years.
- E. thirteen years.

Which of the following is most likely to displace the adjacent teeth?

- A. Lateral periodontal cyst.
- B. Dentigerous cyst.
- C. Periapical cemental dysplasia.
- D. Periapical abscess.
- E. Radicular cyst.

A clinical sign of unilateral fracture of the body of the zygoma is

- A. cerebrospinal rhinorrhea.
- B. impaired hearing.
- C. subconjunctival haemorrhage.
- D. otorrhea.

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Which of the following principle fibre groups of the periodontal ligament is the most numerous and provides the main support for the tooth?

- A. Horizontal.
- B. Transseptal.
- C. Oblique.
- D. Gingival.

To ensure maximum marginal strength for an amalgam restoration the cavosurface angle should

- A. approach 45 degrees.
- B. approach 90 degrees.
- C. be beveled.
- D. be chamfered.

All of the following are parts of the temporal bone EXCEPT the

- A. mastoid.
- B. hamulus.
- C. tympanic.
- D. zygomatic.

Which of the following medications increases a patient's risk for intraoral candidiasis?

- A. Warfarine (Coumadin®).
- B. Cyclosporine.
- C. Pentobarbital.
- D. Ibuprofen.
- E. Pilocarpine.

A rubber dam should be used in

- A. pulp capping procedures.
- B. amalgam placement.
- C. composite placement.
- D. removing carious dentin from deep lesions.
- E. all of the above.

When compared to dental amalgams made from lathe cut particles, dental amalgams made from spherical particles

- A. require more mercury.
- B. set more quickly.
- C. are more difficult to adapt to the cavity preparation.
- D. require higher condensation forces.

In comparing ANSI D and ANSI F speed intra-oral radiographic films, ANSI F speed film emulsion is approximately

- A. 20% more sensitive than ANSI D speed film.
- B. 40% more sensitive than ANSI D speed film.
- C. 60% more sensitive than ANSI D speed film.
- D. 80% more sensitive than ANSI D speed film.

The purpose of a post and core restoration is to

- A. seal the root canal treatment.
- B. reinforce the remaining tooth structure.
- C. retain the crown.
- D. prevent root discolouration.

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In a post-endodontic restoration, the function of the post is to insure

- A. distribution of forces along the long axis.
- B. resistance of the tooth to fracture.
- C. sealing of the root canal.
- D. retention of the definitive restoration.

Which of the following types of bone contain the insertions of the periodontal ligament fibres?

- A. Woven.
- B. Bundle.
- C. Lamellar.
- D. Cortical.

Which of the following is the dominant inflammatory cell type in the initial lesion of gingivitis?

- A. Neutrophil.
- B. Plasma cell.
- C. Macrophage.
- D. Lymphocyte.

Unbagged sterilized instruments

- A. can be stored for up to 24 hours if placed in an airtight container after sterilization.
- B. can be stored for up to 7 days if placed in sterile bags after sterilization.
- C. can be stored for up to 1 year if wrapped after sterilization.
- D. must not be stored after sterilization.

The single most important measure to reduce the risk of transmitting organisms to patients is

- A. use of personal protective barriers: masks, eyewear, outerwear and gloves.
- B. sterilization of instruments and disinfection of the operatory.
- C. handwashing.
- D. introduction of single use instruments and disposables.

A carious lesion on tooth 1.6 appears close to the pulp on the bitewing radiograph. A diagnosis of irreversible pulpitis can be made based on

- A. proximity of the radiolucency to the pulp.
- B. a lower electric pulp test reading compared to the control.
- C. the symptoms reported by the patient.

The principal use of the rubber dam during placement of a composite resin restoration is to provide

- A. interproximal gingival retraction.
- B. contrast between the tooth and the operating field.
- C. access to the operating field.
- D. protection from fluid contamination.

The dentino-enamel junction is the most sensitive portion of a tooth because

- A. free nerve endings terminate on odontoblasts at this region.
- B. odontoblastic processes branch considerably at this region.
- C. ameloblasts make synaptic connections with odontoblasts at this junction.
- D. odontoblastic tubules help convey hydrostatic forces to the pulp cells.

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A drug inhibiting ATP release at a site of injury could be a potential analgesic because ATP

- A. inhibits nociceptors.
- B. activates nociceptors.
- C. causes vasoconstriction.
- D. prevents vasoconstriction.

Saliva is most effective in minimizing an acid challenge by its

- A. lubrication function.
- B. antimicrobial effect.
- C. buffering action.
- D. fluoride concentration.

A patient has a history of shortness of breath and ankle edema. You would suspect

- A. asthma.
- B. emphysema.
- C. rhinophyma.
- D. cardiac insufficiency.

A primary molar, in the absence of its permanent successor,

- A. should be treated endodontically to prevent root resorption.
- B. may remain for years with no significant resorption.
- C. will undergo normal root resorption.
- D. should be extracted.
- E. is more susceptible to dental caries.

The apex of the heart lies deep to the

- A. 2<sup>nd</sup> left intercostal space.
- B. 3<sup>rd</sup> left intercostal space.
- C. 5<sup>th</sup> left intercostal space.
- D. 7<sup>th</sup> left intercostal space.
- E. 9<sup>th</sup> left intercostal space.

The size of pores or cracks in a material

- A. determines a material's fracture toughness.
- B. influences the strength of metals more than ceramics.
- C. decreases with cyclic or fatigue loading.
- D. is not typically a function of a material's processing.

Wettability is NOT a desirable property for which of the following?

- A. Dental impression materials.
- B. Acrylic resin for denture bases.
- C. Uncured composite resins.
- D. Hand instruments for placing resins.
- E. Trituration of amalgam.

When light cured composite resin restorations are polymerized

- A. a conversion rate of 80-95% is achieved.
- B. oxygen improves polymerization of the surface.
- C. cross-linking increases the stiffness of the material.
- D. shrinkage decreases as conversion rate increases.

An enameloma is

- A. an odontoma.
- B. an ameloblastoma.
- C. a pearl of enamel.
- D. an enamel hypocalcification.

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Oral signs and/or symptoms of vitamin B<sub>2</sub> (riboflavin) deficiency may include

1. glossitis.
2. angular cheilitis.
3. pain.
4. erythematous oral mucosa.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A patient presents with a dislocated mandible after an accident. After reduction, the management of this patient should be to

- A. inject the joint with hydrocortisone.
- B. refer for joint surgery.
- C. advise vigorous exercise of the mandible.
- D. recommend mandibular movement be minimized.

Which of the following statements is/are true when using forceps for extraction of a maxillary first molar?

1. Palatal bone is thinner than buccal bone.
2. Buccal bone is easier to expand.
3. Forcep movement should be principally in the palatal direction.
4. Forcep movement should be principally in the buccal direction.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A rubber dam should be used in

- A. pulp capping procedures.
- B. amalgam placement.
- C. composite placement.
- D. removing carious dentin from deep lesions.
- E. all of the above.

Dentinal pain is explained by

- A. hydraulic pressure theory.
- B. hydrodynamic theory.
- C. mechanical deformation theory.
- D. osmotic pressure theory.

All afferent impulses from the pulp result in the sensation of

- A. heat.
- B. pain.
- C. proprioception.
- D. cold.

The occlusal parameter that is most useful to differentiate between an overbite of dental or skeletal origin is the

- A. mandibular curve of Spee.
- B. mandibular curve of Wilson.
- C. molar sagittal relationship.
- D. mandibular anterior lack of space.
- E. maxillary curve of Wilson.

Aspiration prior to a local anesthetic injection reduces the

- A. toxicity of local anesthetic.
- B. toxicity of vasoconstrictor.
- C. possibility of intravascular administration.
- D. possibility of paresthesia.

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A patient who is a hepatitis B carrier presents for an extraction. The extraction should be delayed and

- A. rescheduled at the end of the day for infection control.
- B. an antibiotic prescribed prophylactically.
- C. the patient referred to a hospital dental department.
- D. an evaluation of liver function performed.

The subgingival microbial flora isolated from sites of peri-implantitis is most similar to the flora of

- A. periradicular abscess.
- B. gingivitis.
- C. periodontitis.

Using a high speed handpiece WITHOUT water coolant will

- A. produce a smoother surface.
- B. decrease pulpal damage if used with light pressure.
- C. reduce clogging of dental bur.
- D. reduce debris accumulation.
- E. increase frictional heat.

Which of the following may be associated with a fracture of the mandible?

- A. Diplopia.
- B. Malocclusion.
- C. Swelling of the orbit.
- D. Bleeding from the nose.

It is ethical for a dentist in Canada to decline to treat a patient due to

- A. a difference in religious beliefs.
- B. the patient's infectious status.
- C. a patient being physically challenged.
- D. a patient being mentally challenged.
- E. the dentist's lack of skill or knowledge.

It is ethical to replace amalgam restorations

- A. on request from an informed patient.
- B. to relieve symptoms of multiple sclerosis.
- C. to reduce the risk of developing Alzheimer's disease.
- D. to eliminate toxins from the patient.

Management of a "dry socket" should include

- A. hydrogen peroxide irrigation of socket.
- B. vigorous curettage of the socket.
- C. placement of a dressing in the socket.
- D. a prescription for antibiotics.

Spontaneous hemorrhage from the gingiva may be indicative of

- A. parotitis.
- B. Hodgkin's disease.
- C. diabetes.
- D. leukemia.

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A 70 year old insulin-dependent patient has just completed a 7 day course of ampicillin for a respiratory infection. He presents with signs and symptoms consistent with a diagnosis of oral candidiasis. Which of the following drugs is/are appropriate to manage this condition?

1. Fluconazole.
  2. Nystatin.
  3. Ketoconazole.
  4. Clindamycin.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Plaque accumulation is an etiologic factor in caries as it

- A. is a good source of fermentable carbohydrates.  
B. is an acidic environment.  
C. is composed of bacteria and their by-products.  
D. allows only *S. mutans* species to flourish.

Tooth 1.1 has a small fractured mesioincisal corner into dentin. Which of the following is true with respect to the preparation for the restoration?

- A. Pins are usually necessary to achieve adequate retention.  
B. A lingual dovetail is usually required for retention.  
C. An enamel bevel of 1mm is placed where enamel thickness allows.  
D. Dentin coves are the primary form of retention for the restoration.

Mercury content in an amalgam can be reduced by using

- A. fast setting amalgam.  
B. adequate condensation.  
C. high zinc content alloy.  
D. low copper content alloy.

Pins for cusp replacement should ideally be placed

- A. within enamel.  
B. at the dentino-enamel junction.  
C. a minimum of 0.5-1.0mm from the dentino-enamel junction.  
D. a minimum of 1.5-2.0mm from the dentino-enamel junction.

When light-cured composite resins are placed

- A. surface polymerization is inhibited by carbon dioxide (CO<sub>2</sub>).  
B. the degree of conversion is 85-95%.  
C. increments of resin should not exceed 2mm.  
D. polymerization shrinkage increases with filler content.

The protective role of junctional epithelium is aided by its increased number of

- A. cell layers.  
B. intercellular spaces.  
C. cell-cell adhesions.  
D. collagen fibres.

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In the keyhole model of the enamel prism

- A. crystallites in the tail are angled compared to the head.
- B. the water is located at the prism edges.
- C. proteins are only present in the tail.
- D. crystallites have an identical molecular structure.

The periodontal ligament is constantly remodeled due to the activity of

- A. osteoclasts.
- B. fibroblasts.
- C. macrophages.
- D. mesenchymal cells.

Odontoblast gap junctions

- A. adhere the cells to one another.
- B. attach the cells to the basement membrane.
- C. seal off the dentin from the pulp.
- D. permit lateral cell-cell communication.

When odontoblasts are destroyed as a result of cavity preparation

- A. adjacent fibroblasts differentiate into new odontoblasts.
- B. a permanent defect results in the odontoblast layer.
- C. surrounding odontoblasts are stimulated to divide.
- D. new cells differentiate from pulpal mesenchyme cells.

One of the mechanisms of bacterial adherence to the dental pellicle is through

- A. positively charged bacteria with the pellicle.
- B. interaction of cations such as calcium.
- C. hydrophilic interactions.
- D. interaction of salivary anions.

GABA is a/an

- A. drug binding to benzodiazepine receptor.
- B. neurotrophic factor.
- C. inhibitory neurotransmitter.
- D. excitatory neurotransmitter.

In neurons, glutamate is an amino acid that binds only to

- A. nuclear receptors.
- B. ionotropic receptors.
- C. metabotropic receptors.
- D. ionotropic and metabotropic receptors.

The descending (or repolarizing) phase of the action potential is caused by

- A. opening potassium channels.
- B. closing potassium channels.
- C. opening chloride channels.
- D. closing calcium channels.

Which source delivers the highest dose of radiation to humans?

- A. Cosmic.
- B. Medically-related.
- C. Radon.
- D. Terrestrial.

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Objects that absorb x-ray radiation are referred to on a radiographic image as being

- A. radiodense.
- B. radiolucent.
- C. radiopaque.

Which form of hepatitis does NOT have a known carrier state?

- A. Hepatitis A.
- B. Hepatitis B.
- C. Hepatitis C.
- D. Hepatitis D.

Which of the following describes the radiation produced by high voltage?

- A. Short wavelength, low frequency.
- B. Short wavelength, high energy.
- C. Long wavelength, high frequency.
- D. Long wavelength, low energy.

A 50 year old woman has a history of rheumatoid arthritis, bilateral enlargement of one or more salivary glands and lacrimal glands, as well as dryness of the eyes, nose, mouth and throat. The diagnosis is

- A. erythema multiforme.
- B. Reiter's syndrome.
- C. Gardner's syndrome.
- D. Sjögren's syndrome.
- E. Plummer-Vinson syndrome.

A 70 year old insulin-dependent patient has just completed a 7 day course of ampicillin for a respiratory infection. He presents with signs and symptoms consistent with a diagnosis of oral candidiasis. Which of the following is the most appropriate management for this patient?

- A. Double the patient's insulin dose.
- B. Reduce the patient's insulin dose.
- C. Prescribe a topical steroid.
- D. Prescribe clindamycin.
- E. Prescribe nystatin.

The location and extent of subgingival calculus is most accurately determined clinically by

- A. radiopaque solution used in conjunction with radiographs.
- B. disclosing solution.
- C. probing with a fine instrument.
- D. visual inspection.

In an infrabony pocket, the epithelial attachment is located

- A. within basal bone.
- B. coronal to alveolar bone crest.
- C. apical to alveolar bone crest.

The most likely diagnosis for a child with a painful, fiery-red, diffuse gingivitis is

- A. primary herpetic gingivostomatitis.
- B. aggressive periodontitis.
- C. idiopathic fibromatosis.
- D. aphthous stomatitis.

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Which of the following is/are clinical signs of gingivitis?

1. Loss of stippling.
2. Gingival hyperplasia.
3. Decreased pocket depth.
4. Bleeding on probing.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Regarding dental caries, which of the following is correct?

- A. All carbohydrates are equally cariogenic.
- B. More frequent consumption of carbohydrates increases the risk.
- C. The rate of carbohydrate clearance from the oral cavity is not significant.
- D. Increased dietary fat increases the risk.

Lidocaine (Xylocaine®) is an example of a local anesthetic which is chemically classified as an

- A. amide.
- B. ester.
- C. aldehyde.
- D. ethamine.
- E. aminide.

Procaine (Novocaine®) is an example of a local anesthetic which is chemically classified as an

- A. amide.
- B. ester.
- C. aldehyde.
- D. ethamine.
- E. aminide.

A protective mechanism of the dental pulp to external irritation or caries is the formation of

- A. pulp stones.
- B. tertiary dentin.
- C. secondary cementum.
- D. primary dentin.

Which of the following drugs is used in the treatment of mild allergic reactions?

- A. Isoproterenol.
- B. Meperidine hydrochloride.
- C. Diphenhydramine hydrochloride.
- D. Propoxyphene.

When a radiographic examination is warranted for a 10 year old child, the most effective way to decrease radiation exposure is to

- A. use a thyroid collar and lead apron.
- B. apply a radiation protection badge.
- C. use high speed film.
- D. decrease the kilovoltage to 50kVp.
- E. take a panoramic film only.

If an alginate impression must be stored for a few minutes before the cast is poured, it should be placed in

- A. water.
- B. 100% relative humidity.
- C. a 1% aqueous calcium sulfate solution.

An end result of ionizing radiation used to treat oral malignancies is

- A. deformity of the jaws.
- B. reduced vascularity of the jaws.
- C. increased vascularity of the jaws.
- D. increased brittleness of the jaws.

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Which of the following is most often associated with a nonvital tooth?

- A. Chronic periradicular periodontitis.
- B. Internal resorption.
- C. Periapical cemento-osseous dysplasia.
- D. Hyperplastic pulpitis.

Myxedema is associated with

- A. insufficient parathyroid hormone.
- B. excessive parathyroid hormone.
- C. insufficient thyroid hormone.
- D. excessive thyroid hormone.

Condensing osteitis in the periapical region is indicative of a/an

- A. acute inflammation of the pulp.
- B. pulpal abscess.
- C. chronic inflammation of the pulp.
- D. early apical abscess formation.

A 15 year old presents with hypoplastic enamel on tooth 1.5. All other teeth are normal. This was most probably caused by a/an

- A. vitamin D deficiency.
- B. generalized calcium deficiency.
- C. high fever encountered by the patient when he had measles at age 3.
- D. infection of tooth 5.5 during the development of tooth 1.5.
- E. hereditary factor.

Which of the following features would be most indicative of a cracked tooth?

- A. Periapical radiolucency.
- B. Hypersensitivity to thermal stimuli.
- C. Pain upon biting pressure.
- D. Absent vitalometric response.

A 4 year old child has a normal complement of deciduous teeth, but in appearance they are grayish and exhibit extensive occlusal and incisal wear. Radiographic examination indicates some extensive deposits of secondary dentin in these teeth. This condition is typical of

- A. cleidocranial dysplasia.
- B. amelogenesis imperfecta.
- C. neonatal hypoplasia.
- D. dentinogenesis imperfecta.

Root resorption of permanent teeth may be associated with

- 1. excessive orthodontic forces.
- 2. chronic periradicular periodontitis.
- 3. traumatic injury.
- 4. periapical cemento-osseous dysplasia.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following results from a necrotic pulp?

- A. Dentigerous cyst.
- B. Lateral periodontal cyst.
- C. Chronic periradicular periodontitis.
- D. Pulp polyp.

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Which of the following is/are associated with an unerupted tooth?

1. Odontogenic adenomatoid tumor.
  2. Periapical cemento-osseous dysplasia.
  3. Calcifying epithelial odontogenic tumor.
  4. Cementoblastoma.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

An ankylosed tooth is usually

- A. nonvital.  
B. associated with a root fracture.  
C. infraerupted.  
D. found in the permanent dentition.

For which of the following pathological conditions would a lower central incisor tooth be expected to respond to heat, cold and electric pulp test?

- A. Apical cyst.  
B. Acute apical abscess.  
C. Periapical cemento-osseous dysplasia.  
D. Chronic apical periodontitis.

The microscopic appearance of the central giant cell granuloma of the jaws is similar to that of lesions which occur in

- A. hyperparathyroidism.  
B. Paget's disease.  
C. cleidocranial dysplasia.  
D. hyperpituitarism.

An ameloblastoma can develop from the epithelial lining of which of the following cysts?

- A. Periradicular.  
B. Dentigerous.  
C. Residual.  
D. Lateral periodontal.

Radiographically, the opening of the incisive canal may be misdiagnosed as a

1. branchial cyst.
  2. nasopalatine cyst.
  3. nasolabial cyst.
  4. periradicular cyst.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

On a bite-wing radiograph of posterior teeth, which of the following is most likely to be misdiagnosed as proximal caries?

- A. Cemento-enamel junction.  
B. Marginal ridge.  
C. Carabelli cusp.  
D. Calculus.  
E. Cemental tear.

A well circumscribed 3mm radiolucent lesion is present in the apical region of the mandibular second premolar. The tooth responds normally to vitality tests. The radiolucency is most likely

- A. a periradicular periodontitis.  
B. a dentigerous cyst.  
C. a rarefying osteitis.  
D. the mental foramen.

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A patient complains of acute pain 24 hours after the insertion of a restoration in a tooth with no preexisting periapical pathology. The tooth is vital and tender to percussion. The radiograph will show

- A. an apical radiolucency.
- B. acute osteitis.
- C. root resorption.
- D. condensing osteitis.
- E. normal lamina dura.

A cold stimulus applied to a tooth will produce a hypersensitive response if the tooth

- A. is nonvital.
- B. has a periodontal pocket.
- C. has a hyperemic pulp.
- D. has chronic proliferative pulpitis.

The most appropriate radiographic examination for a 4 year old without visible or clinically detectable caries or anomalies, and with open proximal contacts is

- A. maxillary and mandibular anterior occlusals.
- B. a pair of posterior bite-wings.
- C. maxillary and mandibular posterior periapicals.
- D. no radiographic examination.

One week after an amalgam restoration is placed in the mandibular first premolar, the patient returns complaining of a sharp pain of short duration when eating or drinking something cold. Teeth respond normally to electric pulp testing and heat and the radiographs are normal. The most likely diagnosis is

- A. hypercementosis.
- B. reversible pulpitis.
- C. pulpal microabscess.
- D. acute periradicular periodontitis.

A 6 year old patient has a larger than average diastema between the maxillary central incisors. The radiographic examination shows a mesiodens. In order to manage the diastema, you should extract the mesiodens

- A. after its complete eruption.
- B. once the patient has reached the age of 12.
- C. only if it develops into a cystic lesion.
- D. as soon as possible.

In children, the most common cause of a fistula is a/an

- A. acute periradicular abscess.
- B. suppurative periradicular periodontitis.
- C. acute periodontal abscess.
- D. dentigerous cyst.

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A large carious exposure occurs on a permanent first molar of a 7 year old. There is no periapical involvement and the tooth is vital. The treatment should be to

- A. cap the exposure with calcium hydroxide and place zinc-oxide and eugenol.
- B. perform a pulpotomy and place calcium hydroxide.
- C. perform a pulpectomy.
- D. extract the tooth and place a space maintainer.

In a 4 year old child, the primary central incisor has discoloured following a traumatic injury. The treatment of choice is

- A. pulpotomy.
- B. pulpectomy.
- C. observation.
- D. extraction.

The most appropriate treatment following the extraction of a first primary molar in a 4 year old child is

- A. regular assessment of arch development.
- B. to perform space analysis.
- C. insertion of a space maintainer.
- D. extraction of the contra-lateral molar.
- E. extraction of the opposing molar.

A Le Fort I or Guerin fracture is a

- A. fracture of the zygomatic arch.
- B. horizontal fracture of the maxilla.
- C. fracture of the malar complex involving the floor of the orbit.
- D. pyramidal fracture of the maxilla.
- E. craniofacial dysjunction.

Which of the following will impede healing following the surgical closure of an oroantral fistula?

- 1. Poor flap design.
  - 2. Excessive tissue tension.
  - 3. Blowing the nose.
  - 4. Sinus infection.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

An 8 year old patient with all primary molars still present exhibits a cusp-to-cusp relationship of permanent maxillary and mandibular first molars. The management of this patient should be to

- A. plan serial extractions for more normal adjustment of the occlusion.
- B. refer the patient to an orthodontist for consultation.
- C. place a cervical headgear to reposition maxillary molars.
- D. disk the distal surfaces of primary mandibular second molars to allow normal adjustment of permanent molars.
- E. observe.

To prevent mesial drift of a permanent first molar, the ideal time to place a distal extension space maintainer is

- A. as soon as the tooth erupts through the gingival tissue.
- B. after the permanent second molar has erupted.
- C. immediately after extraction of the primary second molar.
- D. as soon as the extraction site of the primary second molar has completely healed.

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Epinephrine should NOT be used as a vasoconstrictor for patients with uncontrolled

- A. hyperthyroidism.
- B. hyperparathyroidism.
- C. myxedema.
- D. asthma.

A known insulin-dependent diabetic patient feels unwell following the administration of a local anesthetic and becomes pale and sweaty. This condition does not respond to placing the patient in a supine position. The most likely cause is

- A. syncope.
- B. adrenal insufficiency.
- C. hyperglycemia.
- D. hypoglycemia.
- E. carotid sinus reflex.

Generally, glass ionomer cements contain

- A. zinc oxide and distilled water.
- B. zinc oxide and polyacrylic acid.
- C. fluoroaluminosilicate powder and orthophosphoric acid.
- D. fluoroaluminosilicate powder and polyacrylic acid.

A fracture in an all-ceramic crown may be caused by

- 1. inadequate ceramic thickness.
  - 2. sharp line angles in the tooth preparation.
  - 3. excessive occlusal load.
  - 4. use of an inappropriate luting material.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following conditions would NOT require antibiotic premedication before endodontic therapy?

- A. Valvular heart disease.
- B. Cardiac prosthesis.
- C. Persistent odontogenic fistula.
- D. Immunosuppressive therapy.
- E. Organ transplant.

Under normal conditions, the most definitive test to confirm the loss of pulp vitality is

- A. applying warm gutta percha to the crown.
- B. cutting into the dentin without anesthetic.
- C. applying ethyl chloride to the crown.
- D. performing a radiographic examination of the tooth.
- E. performing an electric pulp test.

A radiopaque area within the alveolar process containing several rudimentary teeth suggests a/an

- A. periapical cemento-osseous dysplasia.
- B. ameloblastoma.
- C. compound odontoma.
- D. complex odontoma.
- E. Pindborg tumor.

The recommended cavity access for a Class III carious lesion is from the lingual because it

- A. permits less removal of intact enamel.
- B. preserves the labial enamel for esthetic purposes.
- C. is easier than from the vestibular.
- D. permits the use of a larger bur.

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Composite resins bond to tooth structure through

- A. Van der Waals forces.
- B. micromechanical retention.
- C. chemical bonding.

The minimal occlusal reduction for a porcelain onlay is

- A. 1mm.
- B. 2mm.
- C. 3mm.

The minimum time to wait before placing composite restorations after the completion of a bleaching (whitening) treatment is

- A. 1 to 2 hours.
- B. 24 to 48 hours.
- C. 1 to 2 weeks.
- D. 4 to 5 weeks.

In an ideal Class I occlusion, the cusp of which mandibular tooth is in contact with the central fossa of the maxillary second molar?

- A. Mesio Buccal cusp of the first molar.
- B. Distobuccal cusp of the first molar.
- C. Mesio Buccal cusp of the second molar.
- D. Distobuccal cusp of the second molar.

Assuming there is adequate tooth structure remaining, composite resins can be used as a core material for endodontically treated teeth to be crowned provided

- A. the resin has a high contrast colour with tooth structure.
- B. there is an adequate ferrule.
- C. the resin is autopolymerizing.
- D. subsequent crown margins are not located on cementum.

Overlapping contacts on a bitewing radiograph result from

- 1. malalignment of teeth.
- 2. incorrect vertical angulation of the x-ray beam.
- 3. incorrect horizontal angulation of the x-ray beam.
- 4. patient movement during the exposure.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Elevated serum parathyroid hormone levels result in  $\text{Ca}^{2+}$  being released from bone through receptor-mediated actions on

- A. osteoclasts.
- B. osteoblasts.
- C. osteocytes.
- D. chondroblasts.

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Which of the following is characteristic of a maxillary sinus retention cyst/antral pseudocyst?

- A. Pain and soreness of the face.
- B. Dome-shaped appearance on a radiograph.
- C. Buccal expansion of the maxillary sinus.

A 50 year old obese patient with type 2 diabetes takes oral hypoglycemics. He is frequently skipping meals in order to reduce his weight. During his 8:30 a.m. appointment, his speech becomes slurred and he is less alert than usual. Which of the following is the most appropriate management of this patient?

- A. 175ml of diet cola.
- B. 15g of glucose as tablets or in solution.
- C. 175ml unsweetened orange juice.
- D. Dismissal of the patient to have his breakfast.

Vitamin D is activated in the

- A. skin upon ultraviolet radiation from the sun.
- B. liver upon hydroxylation.
- C. kidney upon hydroxylation.
- D. intestinal mucosa upon absorption.

The Dietary Reference Intake (DRI) recommendation for fat is

% Fat of Total Energy Intake

	Children (4-18 yr)	Adult
A.	20-30%	20-30%
B.	20-35%	25-35%
C.	25-35%	20-35%
D.	25-40%	20-30%

Which of the following statements about alternate sweeteners is INCORRECT?

- A. Saccharin alone is not carcinogenic.
- B. Xylitol is a polyol with the same sweetness as sucrose.
- C. Aspartame is a dipeptide of aspartic acid and glutamic acid.
- D. Cyclamate is not approved as a food additive.

The most common barrier preventing elderly individuals from seeking dental treatment is

- A. the cost associated with receiving treatment.
- B. difficulty getting to and from the dental office.
- C. a lack of perceived need for treatment.
- D. fear of being "hurt".

It may be possible to prepare a tooth for a restoration without anesthesia in an elderly patient due to an increase in

- A. the number of pulp stones found in first molars with advancing age.
- B. the deposition of secondary and tertiary dentin.
- C. hypercementosis.
- D. neurotransmitters in pulpal tissues.

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Which of the following bone lesions of the mandible is/are malignant?

1. Osteosarcoma.
  2. Osteochondroma.
  3. Ewing's tumor.
  4. Fibrous dysplasia.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

When restoring an endodontically treated tooth, the post

- A. reinforces the root.
- B. needs to end within 1mm of the apex.
- C. retains the core.

Which of the following dental procedures could be performed with minimal risk for a 35 year old patient with a severe bleeding disorder?

- A. Mandibular block anesthesia.
- B. Supragingival calculus removal.
- C. Incisional biopsy.
- D. Subgingival restoration.

All of the following appear as midline structures on periapical radiographs EXCEPT

- A. nasopalatine/incisive canal.
- B. anterior nasal spine.
- C. nasal septum.
- D. zygomatic process of the maxilla.

Post-immunization serological test results for a health care worker who has completed the series of vaccinations against hepatitis B is informed that their anti-HBsAg is less than the value required for immunity. The health care worker should

- A. receive one additional vaccination followed by post-immunization testing.
- B. undergo the full series of hepatitis B vaccinations followed by post-immunization testing.
- C. refrain from performing any exposure-prone procedures for a period of 3-6 months followed by a full series of hepatitis B vaccinations.
- D. have liver function tests performed to assess liver damage from a previous hepatitis B infection.

Which of the following muscles is a depressor of the mandible?

- A. Temporalis.
- B. Lateral pterygoid.
- C. Masseter.
- D. Medial pterygoid.

Undercontoured restorations on the vestibular and lingual surfaces of posterior teeth can immediately lead to

- A. deflection of food particles.
- B. gingival recession.
- C. increased root sensitivity.
- D. food impaction.

The advantage of a high copper amalgam is

- A. high early strength.
- B. low post operative sensitivity.
- C. high formation of the  $\gamma_2$  phase.
- D. increased polishability.

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The effects of polymerization shrinkage of composite resin must be taken into account for all the following EXCEPT the placement of a/an

- A. occlusal restoration.
- B. mesiocclusal restoration.
- C. vestibular restoration.
- D. direct veneer restoration.

An 86 year old patient with poor oral hygiene has a cavitated lesion with active caries. The lesion is on the vestibular root surface of a maxillary posterior tooth, and the patient does not want any mercury in their mouth. The most appropriate restorative material for this lesion is a/an

- A. microfill resin composite.
- B. hybrid resin composite.
- C. resin-modified glass ionomer.
- D. amalgam.

Which of the following is NOT a characteristic of cavity liners?

- A. They are placed with minimal thickness.
- B. They provide some type of therapeutic benefit.
- C. They are used as a dentin replacement.
- D. They promote pulpal health.

What is the purpose of having a radiometer in a dental office?

- A. To track the number of x-rays taken in a month.
- B. To measure the output of the visible light-curing unit.
- C. To measure the wavelength of the x-ray machine.
- D. To measure the wavelength of the visible light-curing unit.

A patient has been taking a systemic corticosteroid for 10 years. Which skeletal disorder would the patient most likely have as a result of this medication?

- A. Osteopetrosis.
- B. Osteogenesis imperfecta.
- C. Skeletal hyperostosis.
- D. Osteoporosis.
- E. Osteoarthritis.

A syphilitic gumma is most commonly found on the

- A. lip.
- B. tongue.
- C. palate.
- D. buccal mucosa.
- E. gingiva.

Primary personal protective equipment includes all of the following EXCEPT

- A. protective clothing.
- B. gloves.
- C. masks.
- D. protective eyewear.
- E. glove liners.

With respect to the use of gloves in dentistry,

- A. gloves may be reused on the same patient if they can be removed without contaminating the operator.
- B. utility gloves are appropriate for patient care when no other options are available.
- C. gloves may be used on more than one patient as long as there are no identified risks in that patient's medical history.
- D. sterile gloves should be used during a surgical procedure.

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When managing patients with true latex allergies, which of the following statements is true?

- A. The sterilization process effectively removes latex proteins from instruments handled with latex gloves.
- B. Latex protein antigens can exist in the ambient air for a maximum of 10 minutes following operative procedures.
- C. Emergency kits should be available that contain latex-free materials.
- D. Patients should be scheduled at the end of the day to avoid any exposure to latex products in the dental office.

Which virus is the most likely to cause an infection in a healthcare worker following exposure to blood from an individual infected with the virus?

- A. Hepatitis A.
- B. Hepatitis B.
- C. Hepatitis C.
- D. Human immunodeficiency virus.

Creutzfeldt-Jacob disease is caused by (a)

- A. virus.
- B. bacteria.
- C. fungus.
- D. prion.

Early detection of a noncavitated smooth surface caries lesion allows for a

- A. conservative preparation for a composite resin restoration.
- B. conservative preparation for an amalgam restoration.
- C. preventive regimen to be implemented to arrest the demineralization and remineralize.
- D. conservative preparation for a resin-modified glass ionomer restoration.

A well-controlled type 1 diabetic requires an MOD amalgam restoration. What is the most appropriate management for this patient?

- A. Afternoon appointments should be scheduled.
- B. Insulin should be increased prior to treatment.
- C. Insulin should be decreased prior to treatment.
- D. The patient should follow their normal dietary and insulin regimen.

Which of the following is NOT associated with cancer chemotherapy in an adult?

- A. Candida infection.
- B. Gingival bleeding.
- C. Enamel staining.
- D. Dysgeusia.

For sterilization to occur in an autoclave, the packaged instruments are subjected to pressurized

- A. steam.
- B. chemical vapour.
- C. boiling water.
- D. heated air.

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Post-immunization serological test results for a health care worker who has completed the series of vaccinations against hepatitis B reveals that their anti-HBsAg is less than the value required for immunity. The health care worker should

- A. receive one additional vaccination followed by post-immunization testing.
- B. repeat the full series of hepatitis B vaccinations followed by post-immunization testing.
- C. refrain from performing any exposure-prone procedures for a period of 3-6 months followed by a full series of hepatitis B vaccinations.
- D. have liver function tests performed to assess liver damage from a previous hepatitis B infection.

A dentist infected with Hepatitis C virus but without disease symptoms should

- A. not be allowed to practice.
- B. be allowed to practice but should be excluded from performing exposure prone procedures.
- C. be allowed to practice but should be excluded from performing exposure prone procedures after assessment and agreement by an expert review panel and if there is compliance with standard precautions (routine practices).
- D. be allowed to practice after assessment and agreement by an expert review panel and if there is compliance with standard precautions (routine practices).

An acute oral infection is of most concern in a patient with

- A. pemphigus.
- B. Crohn's disease.
- C. otitis media.
- D. a prosthetic heart valve.

The residual mercury content of an amalgam restoration is significantly affected by

- A. size of the preparation.
- B. amount of amalgam used.
- C. type of amalgam used.
- D. burnishing technique.

Which of the following may be used to disinfect gutta-percha points?

- A. Glass bead sterilizer.
- B. Autoclave.
- C. Chemical solutions.
- D. Flame sterilization.
- E. Dry heat sterilization.

Endodontic therapy is CONTRAINDICATED in teeth with

- A. inadequate periodontal support.
- B. pulp stones.
- C. constricted root canals.
- D. accessory canals.
- E. curved roots.

A patient telephones and tells you he has just knocked out his front tooth but that it is still intact. Your instructions should be to

- A. put the tooth in water and come to your office at the end of the day.
- B. wrap the tooth in tissue and come to your office in a week's time.
- C. put the tooth in alcohol and come to your office immediately.
- D. place tooth under the tongue and come to your office immediately.
- E. place the tooth in milk and come to your office immediately.

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For a cast gold restoration, a gingival bevel is used instead of a shoulder because a bevel

1. protects the enamel.
  2. increases retention.
  3. improves marginal adaptation.
  4. increases the thickness of gold.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

During matrix placement for a Class II cavity preparation, a wedge is placed to

1. separate the teeth.
  2. adapt the matrix to the gingival margin.
  3. aid in the creation of a contact.
  4. absorb moisture.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Microbial virulence factors

- A. are produced by non-pathogenic microbes.  
B. are always pathogenic.  
C. include exotoxins, capsules, endotoxins and enzymes.  
D. are caused only by Gram-positive microbes.

In restoring occlusal anatomy, the protrusive condylar path inclination has its primary influence on the morphology of

- A. cusp height.  
B. anterior teeth only.  
C. mesial inclines of maxillary cusps and distal inclines of mandibular cusps.  
D. mesial inclines of mandibular cusps and distal inclines of maxillary cusps.

Sterilization of carious dentin without pulp injury is assured by the application of

- A. phenol.  
B. 70% ethyl alcohol.  
C. chlorhexidine.  
D. absolute alcohol.  
E. None of the above.

Accessory canals in permanent teeth are most commonly found in the

- A. cervical third of the root.  
B. middle third of the root.  
C. apical third of the root.  
D. bifurcation area.  
E. trifurcation area.

What clinical evidence would support a diagnosis of acute dento-alveolar abscess?

1. A negative reaction to the electric vitality tester.
  2. A positive reaction of short duration to cold.
  3. A positive reaction to percussion.
  4. Presence of a draining fistula.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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Which of the following microorganisms are most frequently found in infected root canals?

- A. Streptococcus viridans.
- B. Staphylococcus aureus.
- C. Lactobacilli.
- D. Enterococci.
- E. Staphylococcus albus.

Odontoblast nuclei displacement into adjacent dentinal tubuli is thought to be

- 1. a reversible pathologic condition.
- 2. due to increased intrapulpal tissue pressure.
- 3. due to contraction of collagen fibres.
- 4. more frequent following the use of air coolant rather than water coolant.
- 5. one of the first histological changes following operative trauma.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In the mandibular first premolar, the occlusal dovetail of an ideal disto-occlusal amalgam preparation is usually not extended into the mesial fossa because of the

- A. small lingual lobe.
- B. large buccal cusp.
- C. large buccal pulp horn.
- D. prominent transverse ridge.

When odontoblasts are destroyed or undergo degeneration, they are replaced by

- A. ameloblasts.
- B. undifferentiated mesenchymal cells.
- C. multinucleated giant cells.
- D. osteoblasts.

Aging of the pulp is evidenced by a relative increase in

- 1. vascularity.
- 2. nerve tissue.
- 3. cell numbers.
- 4. fibrous elements.
- 5. calcification.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (3) (4) (5)
- D. (4) and (5)

Which of the following cells are characteristic of chronic inflammation of the dental pulp?

- 1. Neutrophils.
- 2. Eosinophils.
- 3. Lymphocytes.
- 4. Macrophages.
- 5. Plasma cells.

- A. (1) (2) (3)
- B. (1) and (2)
- C. (1) (4) (5)
- D. (1) and (5)
- E. (3) (4) (5)

The masseter muscle originates from the

- A. angle of the mandible.
- B. coronoid process.
- C. pterygoid fossa.
- D. zygomatic arch.

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The physiologic rest position of the mandible is

1. a position determined by the musculature.
  2. a fairly constant position throughout life.
  3. used in determining occlusal vertical dimension.
  4. used when making a centric interocclusal record.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which of the following muscles contribute to the protrusion of the mandible?

- A. Medial pterygoids.  
B. Geniohyoids.  
C. Lateral pterygoids.  
D. Temporalis.

Which of the following muscles comprise the retromolar pad?

1. Lateral (external) pterygoid.
  2. Buccinator.
  3. Palatoglossus.
  4. Superior constrictor.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The success of indirect pulp capping is dependent upon

- A. removal of all caries at the enamel-dentin junction.  
B. use of calcium hydroxide.  
C. a well sealed restoration.  
D. All of the above.

A tooth with a mild pulpitis should be sedated with

- A. polycarboxylate cement.  
B. composite resin.  
C. silicophosphate cement.  
D. zinc-oxide-eugenol cement.

Polycarboxylate cement may be used as a base material beneath a metallic restoration because

- A. its thermal conductivity is similar to dentin and enamel.  
B. its thermal diffusivity is similar to dentin and enamel.  
C. its compressive strength when set will resist forces of condensation.  
D. All of the above.

The most important principle dictating location and size of access to the root canal system is

- A. preservation of tooth structure.  
B. removal of all caries.  
C. straight line access to the canal.  
D. removal of all pulp horns.

Function(s) of the dental pulp include(s)

1. defensive.
  2. sensory.
  3. circulatory.
  4. dentin repair.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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Which of the following nerves should be anesthetized for extraction of a maxillary lateral incisor?

1. Nasociliary.
  2. Nasopalatine.
  3. Sphenopalatine.
  4. Anterior superior alveolar.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Extraction of a tooth is CONTRAINDICATED in the dental office for a patient who

1. had a myocardial infarct two months ago.
  2. is hypothyroid.
  3. has a Factor VIII deficiency.
  4. is 4 months pregnant.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Enlargement of the gingiva, described as idiopathic fibromatosis, is best described as

- A. degeneration.  
B. inflammation.  
C. hyperplasia.  
D. neoplasia.

Hyperkeratosis, acanthosis, dysplasia, increased mitosis, intact basal cell layer and chronic inflammatory cells are histologic features that may be found in

- A. squamous cell carcinoma.  
B. carcinoma in situ.  
C. papillofibroma.  
D. endothelioma.

An excisional biopsy of a nodule 5mm in diameter on the lateral border of the tongue was diagnosed as a fibroma. This patient should have

- A. hemisection of the tongue.  
B. radiotherapy to site of biopsy.  
C. no additional therapy.  
D. re-excision with wider margins.  
E. radium implantation around biopsy site.

Lancinating paroxysmal pain in the posterior part of the tongue, tonsil, nasopharynx and pharynx is most likely diagnostic of

- A. Ménière's disease.  
B. trigeminal neuralgia.  
C. sphenopalatine neuralgia.  
D. glossopharyngeal neuralgia.  
E. psychotic glossopyrosis.

The greatest single factor in reducing radiation exposure in dentistry is

- A. higher kVp.  
B. proper filtration.  
C. high speed film.  
D. collimation of the X-ray beam.

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Which of the following sites for squamous cell carcinoma has the best prognosis?

- A. Lower lip.
- B. Retromolar area.
- C. Gingiva.
- D. Buccal mucosa.
- E. Hard palate.

In hyperparathyroidism, typical features of bone involvement are

- 1. subperiosteal erosion of the phalanges.
  - 2. osteopetrosis.
  - 3. pathological fractures.
  - 4. renal stones.
- A. (1) (3) (4)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. All of the above.

A decrease of which of the following is indicative of hypoparathyroidism?

- A. Serum phosphorus.
- B. Serum calcium.
- C. Thyroid activity.
- D. Serum alkaline phosphatase.

Erythroblastosis fetalis may be a cause of

- A. supernumerary incisors.
- B. pigmented teeth.
- C. peg lateral incisors.
- D. Fordyce's granules.
- E. blue sclerae.

A patient who uses nitroglycerine has

- A. rheumatic heart disease.
- B. asthma.
- C. coronary artery disease.
- D. high blood pressure.
- E. cardiac arrhythmia.

When a patient experiences continuous pain in the maxillary premolar and molar areas and there is no evidence of dental infection, the most likely diagnosis is

- A. trigeminal neuralgia.
- B. acute maxillary sinusitis.
- C. impacted maxillary canine.
- D. impacted maxillary third molar.
- E. glossopharyngeal neuralgia.

Loss of taste to the anterior two thirds of the tongue and a lack of secretion of submandibular glands indicates nerve damage to the

- A. mandibular division of cranial V.
- B. long buccal nerve.
- C. chorda tympani nerve.
- D. cranial VII.

The benign neoplasm that originates from squamous epithelium is called a/an

- A. adenoma.
- B. choriocarcinoma.
- C. chondroma.
- D. lipoma.
- E. papilloma.

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The apical region of a non-vital tooth with a deep carious lesion may radiographically show

1. widening of the periodontal space.
  2. loss of lamina dura.
  3. a circumscribed radiolucency.
  4. calcification of the periodontal membrane.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

An increased heart rate may be associated with

- A. hypothyroidism.  
B. prolonged corticosteroid therapy.  
C. hyperthyroidism.  
D. Down syndrome.

Selection of the appropriate kilovoltage for dental films is influenced by

- A. line voltage fluctuation.  
B. diameter of the primary beam of radiation.  
C. type of timer.  
D. tissue density.  
E. filter thickness.

In the early stage, a periradicular abscess can be differentiated from a lateral periodontal abscess by

- A. pain.  
B. type of exudate.  
C. tenderness to percussion.  
D. response of pulp to electrical stimulation.  
E. radiographic examination.

In the presence of an acute bacterial infection, laboratory tests will show an increase in

- A. polymorphonuclear leukocytes.  
B. plasma cells.  
C. lymphocytes.  
D. monocytes.  
E. eosinophils.

A patient presents with apparent paralysis of one side of the face which appeared the day before. What is the most likely diagnosis?

- A. Glossodynia.  
B. Bell's palsy.  
C. Myasthenia gravis.  
D. Trigeminal neuralgia.

Sickle cell anemia is

- A. a genetic disease.  
B. caused by exposure to radiation.  
C. a viral infection.  
D. a drug reaction.  
E. an auto-immune disease.

Metastasis is most likely to occur in

- A. squamous cell carcinoma.  
B. basal cell carcinoma.  
C. ameloblastoma.  
D. complex odontoma.  
E. odontogenic fibroma.

An ameloblastoma is most frequently found in

- A. the anterior region of the maxilla.  
B. the mandible, near the junction of the body and the ramus.  
C. the posterior region of the maxilla.  
D. in the anterior region of the mandible near the midline.

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Which gingival manifestation(s) would be expected in a patient with a blood dyscrasia?

1. Enlargement.
  2. Bleeding.
  3. Ulceration.
  4. Atrophy.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Mucocoeles are most commonly found in the

- A. upper lip.
- B. lower lip.
- C. tongue.
- D. buccal mucosa.
- E. soft palate.

Multiple supernumerary teeth are most commonly found in

- A. cherubism.
- B. cretinism.
- C. hypothyroidism.
- D. cleidocranial dysplasia.
- E. Down's syndrome.

Which of the following is NOT a sign or symptom of the myofascial pain dysfunction syndrome?

- A. Pain.
- B. Muscle tenderness.
- C. Limitation of jaw motion.
- D. "Clicking" or "popping" noise in the joints.
- E. Radiographic changes of the joint.

The most logical explanation for causing swelling beneath the eye caused by an abscessed maxillary canine is that the

- A. lymphatics drain superiorly in this region.
- B. bone is less porous superior to the root apex.
- C. infection has passed into the angular vein which has no valves.
- D. the root apex lies superior to the attachment of the caninus and levator labii superioris muscles.

The finding of "acid-fast" microorganisms in sputum suggests the presence of

- A. Mycobacterium tuberculosis.
- B. Diplococcus pneumoniae.
- C. Streptococcus pyogenes.
- D. Neisseria gonorrhoeae.

Excessive formation of scar tissue beyond the wound margin is called

- A. a fibroma.
- B. a keloid.
- C. a fibro-epithelial polyp.
- D. epithelial hyperplasia.

A clinical finding common to alcoholism, poorly-controlled diabetes mellitus, uremia and liver disease is

- A. smooth tongue.
- B. increased blood pressure.
- C. coated tongue.
- D. labial fissures.
- E. halitosis.

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In radiography, minimum magnification and maximum definition are achieved by

- A. minimum OFD (object-film distance) and minimum FFD (focal-film distance).
- B. minimum OFD (object-film distance) and maximum FFD (focal-film distance).
- C. maximum OFD (object-film distance) and maximum FFD (focal-film distance).
- D. maximum OFD (object-film distance) and minimum FFD (focal-film distance).

The cells responsible for antibody production are called

- A. polymorphonuclear leukocytes.
- B. mast cells.
- C. plasma cells.
- D. macrophages.
- E. megakaryocytes.

Intermittent painful swelling in the submandibular region that increases at mealtime is indicative of

- A. a ranula.
- B. a blockage of Wharton's duct.
- C. Ludwig's angina.
- D. a blockage of Stensen's duct.
- E. an epidemic parotitis.

A patient with a white blood cell count of  $34,000/\text{mm}^3$  has a differential of lymphocytes 62%, lymphoblasts 4% and polymorphonuclear leukocytes 34%. The most likely form of leukemia is

- A. aleukemic.
- B. granulocytic.
- C. monocytic.
- D. lymphocytic.
- E. plasma cell.

Which of the following is/are NOT usually affected by hereditary ectodermal dysplasia?

- A. Salivary glands.
- B. Teeth.
- C. Sweat glands.
- D. Hair.
- E. Fingernails.

The term used to describe epithelial changes including nuclear hyperchromatism, loss of increased nuclear to cytoplasmic ratio and abnormal mitoses is

- A. acanthosis.
- B. hyperkeratosis.
- C. dysplasia.
- D. parakeratosis.
- E. hyperparakeratosis.

Which one of the following would be of greatest value in determining the etiology of an oral ulceration?

- A. History of the oral lesion.
- B. Cytological smear.
- C. Systemic evaluation.
- D. Laboratory tests.

A patient suddenly becomes pale and sweaty after an injection of 4ml of lidocaine 2% with epinephrine 1:100,000. The radial pulse is slow and steady. The respiration is slow. The blood pressure is 80/60. What is the most probable diagnosis?

- A. A toxic reaction to lidocaine.
- B. A toxic reaction to epinephrine.
- C. An allergic reaction to the local anesthetic.
- D. Incipient syncope.
- E. An impending adrenal insufficiency.

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A periapical infection of a mandibular third molar may spread by direct extension to the

1. parapharyngeal space.
  2. submandibular space.
  3. pterygomandibular space.
  4. submental space.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The most likely complication associated with the extraction of an isolated maxillary second molar is

- A. a dry socket.
- B. nerve damage.
- C. fracture of the malar ridge.
- D. fracture of the tuberosity.

A patient presenting with diplopia, exophthalmos, nasal bleeding and swelling, may suffer from a fracture of the

- A. neck of the condyle.
- B. body of the mandible.
- C. zygomatic bone.
- D. maxillary tuberosity.

Reduced mobility of the temporomandibular joint is called

- A. Charcot's arthritis.
- B. osteoarthritis.
- C. ankylosis.
- D. arthrosis.

Bacterial infection may be confirmed by

1. white blood cell count.
  2. hemoglobin level.
  3. erythrocyte sedimentation rate.
  4. platelet count.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A 20-year old male presents with a three-day history of an acute generalized gingivitis. He has malaise, fever and bilateral cervical lymphadenopathy. A blood examination reveals

Hb: 8.9g/100ml  
Platelets: 82,000/mm<sup>3</sup>  
Red blood cell count: 3,900,000/mm<sup>3</sup>  
White blood cell count: 870,000/mm<sup>3</sup>

Normal Values:

Hb: 14-18g/100ml  
Platelets: 150,000-400,000/mm<sup>3</sup>  
Red blood cell count: 4-5million/mm<sup>3</sup>  
White blood cell count: 5,000-10,000/mm<sup>3</sup>

The most likely diagnosis is

- A. thrombocytopenic purpura.
- B. acute myelogenous leukemia.
- C. infectious mononucleosis.
- D. acute necrotizing ulcerative gingivitis.

Ludwig's angina may cause death by

- A. heart failure.
- B. asphyxia.
- C. convulsions.
- D. paralysis of muscles of respiration.
- E. pyemia.

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If an odontogenic infection involves the pterygomandibular space, the most obvious clinical sign will be

- A. trismus.
- B. facial swelling.
- C. swelling in the submandibular area.
- D. rise in body temperature above 39°C (102°F).

It is difficult to obtain satisfactory anesthesia in the presence of infection near the injection site because

- A. the swelling causes increased pressure on the nerves.
- B. increased blood supply carries the anesthetic solution away too fast.
- C. acidity of the infected tissue inhibits action of the anesthetic agent.
- D. alkalinity of the infected tissue inhibits action of the anesthetic agent.

Which of the following drugs are classic antagonists for curare over-dosage?

- A. Anticholinesterases.
- B. Ganglionic stimulants.
- C. Ganglionic blocking agents.
- D. Alpha adrenergic blocking agents.
- E. Beta adrenergic blocking agents.

The major stimulator of respiration is

- A. low blood pressure.
- B. high percentage of blood oxygen.
- C. low percentage of blood carbon dioxide.
- D. high percentage of blood carbon dioxide.

The most common complication of a venipuncture is

- A. syncope.
- B. hematoma.
- C. thrombophlebitis.
- D. embolus.

Antihistamines act by

- A. increasing the action of histaminase.
- B. altering the formation of histamine.
- C. blocking the actions of histamine by competitive inhibition.
- D. interfering with the degradation of histamine.

Tetracyclines

- 1. have no side effects.
- 2. may increase susceptibility to superinfections.
- 3. are safe to use during pregnancy.
- 4. have a wide spectrum of antibacterial activity.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which valve is most commonly affected by rheumatic heart disease?

- A. Aortic.
- B. Pulmonary.
- C. Tricuspid.
- D. Mitral.

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A therapeutic advantage of penicillin V over penicillin G is

- A. greater resistance to penicillinase.
- B. broader antibacterial spectrum.
- C. greater absorption when given orally.
- D. slower renal excretion.
- E. None of the above.

Trismus is most frequently caused by

- A. tetanus.
- B. muscular dystrophy.
- C. infection.
- D. mandibular fracture.

Acetaminophen in therapeutic doses

- 1. retards platelet function.
  - 2. has strong anti-inflammatory properties.
  - 3. produces CNS stimulation.
  - 4. has antipyretic properties.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Short-acting barbiturates are metabolized mainly in the

- A. liver.
- B. kidneys.
- C. small intestine.
- D. pancreas.
- E. spleen.

All of the following are possible effects of acetylsalicylic acid except

- A. reduction of fever.
- B. shortening of bleeding time.
- C. suppression of inflammatory response.
- D. bleeding from the gastrointestinal tract.

Which of the following does NOT influence the rate of induction during inhalation anesthesia?

- A. Pulmonary ventilation.
- B. Blood supply to the lungs.
- C. Hemoglobin content of the blood.
- D. Concentration of the anesthetic in the inspired mixture.
- E. Solubility of the anesthetic in blood.

Which of the following would you prescribe for an anxious dental patient with a peptic ulcer?

- A. Reserpine.
- B. Scopolamine.
- C. Silica gel.
- D. Diazepam.
- E. Calcium carbonate.

Unconsciousness in syncope results from

- A. electrolyte imbalance.
- B. neurogenic shock.
- C. cerebral hyperemia.
- D. cerebral hypoxia.

The inorganic ion that is implicated in primary hypertension is

- A. sodium.
- B. fluoride.
- C. potassium.
- D. magnesium.

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In a standard dental cartridge (carpule) containing 1.8ml 2% lidocaine with epinephrine 1/100,000, the amount of vasoconstrictor is

- A. 18.0 mg.
- B. 0.018 mg.
- C. 1.8 mg.
- D. 0.18 mg.
- E. 180.0 mg.

Vestibuloplasty is a preprosthetic surgical procedure used to

- A. facilitate reliable impression making.
- B. provide adequate posterior inter-arch space.
- C. allow placement of teeth over the residual ridge.
- D. increase the supporting surface area.

In a standard inferior alveolar nerve block, which muscle is penetrated by the needle?

- A. Buccinator.
- B. Mylohyoid.
- C. Superior constrictor.
- D. Masseter.
- E. Medial (internal) pterygoid.

A 57 year old man received 10mg of diazepam intravenously. He becomes unresponsive to verbal stimuli, and his respirations are depressed to 10 per minute. Appropriate treatment is to

- A. administer ephedrine.
- B. observe the patient.
- C. force the patient to drink coffee.
- D. support respiration with oxygen.

The chief mechanism by which the body metabolizes short-acting barbiturates is

- A. oxidation.
- B. reduction.
- C. hydroxylation and oxidation.
- D. sequestration in the body fats.

Early anoxia is characterized by

- 1. cyanosis.
  - 2. bradycardia.
  - 3. tachycardia
- A. (1) only
  - B. (1) and (2)
  - C. (1) and (3)
  - D. All of the above.

An acute periapical abscess originating from a mandibular third molar generally points and drains in the

- A. submandibular space.
- B. pterygomandibular space.
- C. buccal vestibule.
- D. buccal space.

When sutures are used to reposition tissue over extraction sites, they should be

- 1. placed over firm bone where possible.
  - 2. interrupted, 15mm apart.
  - 3. firm enough to approximate tissue flaps without blanching.
  - 4. tight enough to produce immediate hemostasis.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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What is the maximum number of cartridges (1.8ml) of a 2% local anesthetic solution that can be administered without exceeding a total dose of 300mg?

- A. 2.
- B. 4.
- C. 6.
- D. 8.
- E. 10.

A radiographic examination of a 10 year old child reveals retention of deciduous teeth and presence of many unerupted supernumerary teeth. This is characteristic of

- A. cleidocranial dysplasia.
- B. ectodermal dysplasia.
- C. dentinogenesis imperfecta.
- D. congenital hypothyroidism.

After an inferior alveolar nerve block injection, a patient would develop seventh nerve paralysis if the injection was made into the

- A. internal maxillary artery.
- B. retroparotid space.
- C. internal pterygoid muscle.
- D. retromandibular vein.
- E. pterygoid plexus of veins.

In cephalometry, the most stable point in a growing skull is the

- A. sella turcica.
- B. nasion.
- C. Broadbent's point.
- D. Bolton point.

In primary molars, radiographic bony changes from an infection are initially seen

- A. at the apices.
- B. in the furcation area.
- C. at the alveolar crest.
- D. at the base of the developing tooth.

The radiographic appearance of internal resorption is

- A. radiolucent enlargement of the pulp cavity.
- B. radiolucency around the apex of the root.
- C. radiolucency on the surfaces of the root.
- D. localized radiopacities in the pulp cavity.
- E. radiopacity around the apex of the root.

The highest incidence of congenitally missing lateral incisors is most likely seen in a patient with

- A. unilateral cleft lip and palate.
- B. congenital heart disease.
- C. Down's syndrome.
- D. hyperthyroidism.

Roots of the permanent maxillary central incisors are completed by what age?

- A. 8 years.
- B. 10 years.
- C. 12 years.
- D. Later than 12 years.

The organisms associated with a carious pulpitis are

- A. streptococci.
- B. staphylococci.
- C. spirochetes.
- D. viruses.

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Mandibular growth

- A. is sustained over a longer period of time in girls.
- B. is sustained over a longer period of time in boys.
- C. occurs at the same chronologic age in both sexes.
- D. occurs two years earlier in boys than in girls.

Hypothyroidism affects the dental developmental pattern by

- A. interfering with jaw growth.
- B. delaying the eruption timetable.
- C. causing sclerotic bone to form over the occlusal surface of erupting teeth.
- D. accelerating the eruption timetable.

A single tooth anterior crossbite found in a 9 year old should

- A. self-correct.
- B. be treated with a removable appliance.
- C. have 2 arch orthodontic treatment.
- D. be treated in the complete permanent dentition.
- E. be observed and treated when the cuspids have erupted.

Mandibular condylar region grows by

- A. sutural and interstitial proliferation.
- B. interstitial and appositional proliferation.
- C. appositional and sutural proliferation.
- D. interstitial proliferation only.
- E. appositional proliferation only.

The roots of primary molars in the absence of their permanent successors

- 1. sometimes are partially resorbed and become ankylosed.
- 2. may remain for years with no significant resorption.
- 3. may remain for years partially resorbed.
- 4. are always resorbed.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A Class II dental occlusion in the mixed dentition will likely

- A. develop into a Class I occlusion after normal exfoliation of the primary molars.
- B. worsen with forward growth of the maxilla.
- C. develop into a Class I occlusion with late mandibular growth.
- D. develop into a skeletal malocclusion with growth of the maxilla and mandible.
- E. not change as the maxilla and mandible grow.

Alveolar bone is undergoing remodeling

- A. through the primary dentition.
- B. until the end of mixed dentition.
- C. until the complete eruption of permanent teeth.
- D. throughout life.

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A single hypoplastic defect located on the labial surface of a maxillary central incisor is most likely due to a/an

- A. dietary deficiency.
- B. endocrine deficiency.
- C. tetracycline therapy.
- D. trauma to the maxillary primary central incisor.
- E. high fluoride intake.

An exchange of calcium ions between saliva and enamel is

- 1. affected by fluoride.
  - 2. a component of remineralization and demineralization.
  - 3. important in maintenance of tooth structure.
  - 4. pH dependent.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

A 3 year old requires the extraction of a deciduous maxillary second molar. The local anesthetic technique of choice is

- A. a posterior superior alveolar block.
- B. buccal and palatal infiltration.
- C. a tuberosity block plus subperiosteal infiltration of the mesio-buccal root.
- D. an infra-orbital block.

The mechanism of adjustment to maintain the shape and proportions of bone throughout its growth period is called

- A. remodeling.
- B. cortical drift.
- C. area relocation.
- D. translatory growth.

The most frequent cause of malocclusion is

- A. thumbsucking.
- B. mouth breathing.
- C. heredity.
- D. ectopic eruption.

In the mandibular dental arch of a 12-year old boy, the permanent first molars are in contact with the first premolars and the crowns of the second premolars have erupted lingually. The likely cause is

- A. ankylosis of the mandibular second premolars.
- B. lack of space.
- C. teeth too large for the dental arch.
- D. premature loss of deciduous second molars.
- E. faulty lingual eruption of the second premolars.

A facebow is used to record the

- 1. vertical dimension of occlusion.
  - 2. inter-occlusal relationship.
  - 3. horizontal condylar inclination.
  - 4. relationship of the maxilla to the hinge axis.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only.
  - E. All of the above.

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Which oral mucosa changes are possible side effects of chemotherapy?

1. Atrophic thinning.
  2. Ulceration.
  3. Necrosis.
  4. Spontaneous bleeding.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The oral mucosa covering the base of the alveolar bone

- A. is normally non-keratinized but can become keratinized in response to physiological stimulation.  
B. is closely bound to underlying muscle and bone.  
C. does not contain elastic fibres.  
D. merges with the keratinized gingiva at the mucogingival junction.  
E. has a tightly woven dense collagenous corium.

The enamel structures most resistant to the action of acids are

- A. cuticles.  
B. lamellae.  
C. rods.  
D. interprismatic substances.

Which of the following foods is the most cariogenic?

- A. Cheese.  
B. Dark chocolate.  
C. Jam.  
D. Toffee.

Epidemiology of disease is best described as the

- A. data obtained from sickness surveys.  
B. usual low level of disease normally found within a population.  
C. control of disease.  
D. study of disease patterns in a population.

With the development of gingivitis, the sulcus becomes predominantly populated by

- A. gram-positive organisms.  
B. gram-negative organisms.  
C. diplococcal organisms.  
D. spirochetes.

The colour of normal gingiva is affected by the

1. vascularity of the gingiva.
  2. epithelial keratinization.
  3. thickness of the epithelium.
  4. melanin pigmentation.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Which cells migrate into the gingival sulcus in the largest numbers in response to the accumulation of plaque?

- A. Plasma cells and monocytes.  
B. Polymorphonuclear leukocytes.  
C. Macrophages.  
D. Lymphocytes.  
E. Mast cells.

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Gingival crevicular fluid

- A. never varies in volume.
- B. is a transudate.
- C. is derived from mast cells.
- D. is an exudate.
- E. B. and D.

After a tooth surface has been completely cleaned, the new mucoprotein coating which forms on the surface is called

- A. pellicle.
- B. plaque.
- C. materia alba.
- D. primary cuticle.
- E. Nasmyth's membrane.

Maximum shrinkage after gingival curettage can be expected from tissue that is

- A. fibroedematous.
- B. edematous.
- C. fibrotic.
- D. formed within an infrabony pocket.
- E. associated with exudate formation.

During tooth development, vitamin A deficiency may result in

- A. peg-shaped teeth.
- B. partial anodontia (hypodontia).
- C. Hutchinson's incisors.
- D. enamel hypoplasia.
- E. dentinogenesis imperfecta.

Dietary deficiency of vitamin D can result in

- A. abnormal formation of osteoid.
- B. osteitis fibrosa cystica.
- C. Paget's disease.
- D. myositis ossificans.
- E. osteogenesis imperfecta.

Fluorides are effective in the prevention of dental caries by

- A. increasing the resistance of dentin to bacterial penetration.
- B. causing tooth enamel to be more resistant to demineralization.
- C. providing a more favorable pulpal blood supply.
- D. All of the above.

The periodontium is best able to tolerate forces directed to a tooth

- A. horizontally.
- B. laterally.
- C. obliquely.
- D. vertically.

Overhangs on restorations initiate chronic inflammatory periodontal disease by

- A. increasing plaque retention.
- B. increasing food retention.
- C. causing traumatic occlusion.
- D. causing pressure atrophy.

Caries in older persons is most frequently found on which of the following locations?

- A. Pits and fissures.
- B. Proximal enamel.
- C. Root surfaces.
- D. Incisal dentin.

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Which treatment procedure is indicated for a patient with asymptomatic age related gingival recession?

- A. Connective tissue graft.
- B. Gingivoplasty.
- C. Lateral sliding flap.
- D. Gingival graft.
- E. No treatment.

In patients with advanced periodontitis, mobile teeth should be splinted in order to

- A. reduce gingival inflammation.
- B. accelerate epithelialization after periodontal surgery.
- C. enhance formation of a new connective tissue attachment after surgery.
- D. None of the above.

Irregularly distributed shallow to moderate craters in the interseptal bone are best eliminated by

- A. osteoplasty.
- B. gingivoplasty.
- C. deep scaling.
- D. bone grafting.

Which of the following foods is LEAST cariogenic?

- A. Canned fruit.
- B. Potatoes.
- C. Fruit jello.
- D. Cheese.
- E. White bread.

In a young patient living in an area with communal water fluoridation, the fluoride concentration of an erupted tooth is greatest

- A. at the dentino-enamel junction.
- B. on the surface of the clinical crown.
- C. at the layer of dentin nearest the pulp chamber.
- D. evenly throughout the enamel.

DMF-S is an index for expressing

- A. dental needs.
- B. tooth mortality.
- C. extent of dental neglect.
- D. dental caries.

A clenching habit may be a factor in

- A. suprabony periodontal pocket formation.
- B. marginal gingivitis.
- C. increased tooth mobility.
- D. generalized recession.

Abrasion is most commonly seen on the

- A. lingual surface of posterior teeth.
- B. occlusal surface of posterior teeth.
- C. incisal edges.
- D. facial surfaces of teeth.

Carious lesions are most likely to develop if a patient has

- A. a high lactobacillus count.
- B. saliva with low buffering capacity.
- C. plaque on his teeth.
- D. lactic acid in his mouth.

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The most important objective of occlusal adjustment of a natural dentition is to

- A. prevent temporomandibular joint syndrome.
- B. increase the shearing action in mastication.
- C. improve oral hygiene by preventing food impaction.
- D. achieve a more favorable direction and distribution of forces of occlusion.

An increase of immunoglobulins is consistent with increased numbers of

- A. fibroblasts.
- B. neutrophils.
- C. lymphocytes.
- D. plasma cells.

Crown-root ratio and residual bone support can best be seen radiographically in

- A. a panoramic film.
- B. a bite-wing film.
- C. a periapical film - bisecting angle technique.
- D. a periapical film - paralleling technique.

The absence of adequate drainage in a periodontal pocket may result in

- A. cyst formation.
- B. abscess formation.
- C. epithelial hyperplasia.
- D. increased calculus formation.

Necrotizing ulcerative gingivitis (NUG) and acute herpetic gingivostomatitis can be differentiated clinically by (the)

- A. location of the lesions.
- B. temperature of the patient.
- C. pain.
- D. lymphadenopathy.

The instrument best suited for root planing is a/an

- A. hoe.
- B. file.
- C. curette.
- D. sickle scaler.
- E. ultrasonic scaler.

Correction of an inadequate zone of attached gingiva on several adjacent teeth is best accomplished with a/an

- A. apically repositioned flap.
- B. laterally positioned sliding flap.
- C. double-papilla pedicle graft.
- D. coronally positioned flap.
- E. free gingival graft.

The higher modulus of elasticity of a chromium-cobalt-nickel alloy, compared to a Type IV gold alloy, means that chromium-cobalt-nickel partial denture clasp will require

- A. a heavier cross section for a clasp arm.
- B. a shorter retentive arm.
- C. more taper.
- D. a shallower undercut.

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Which of the following physical properties would be least important for an impression material for partially edentulous patients?

- A. Biocompatibility.
- B. Dimensional stability.
- C. Ease of manipulation.
- D. Adhesion to calcium.
- E. Elasticity.

The addition of platinum to a dental gold alloy results in increased

- 1. strength.
  - 2. hardness.
  - 3. melting point.
  - 4. resistance to corrosion.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The main purpose of flux in soldering is to

- A. dissolve surface oxides and prevent further oxidation.
- B. prevent recrystallization and grain growth.
- C. prevent oxidation and lower the melting range of the solder.
- D. dissolve surface oxides and lower the melting range.

During the setting phase, a dental stone mixture will exhibit

- A. expansion.
- B. contraction.
- C. loss in compressive strength.
- D. gain in moisture content.

An epinephrine-containing retraction cord has the potential of

- A. interfering with the setting of the impression material.
- B. causing tissue necrosis.
- C. producing a systemic reaction.
- D. discolouring gingival tissue.

A cast post and core is used to

- 1. provide intraradicular venting.
  - 2. strengthen a weakened tooth.
  - 3. redirect the forces of occlusion.
  - 4. provide retention for a cast crown.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The gingival margin of the preparation for a full crown on a posterior tooth, with a clinical crown that satisfies the requirements for retention and resistance, should be placed

- A. 0.5mm subgingivally.
- B. on the enamel.
- C. at least 1mm supragingivally.
- D. at the cemento-enamel junction.
- E. at the gingival margin.

Improper temporary coverage of bridge abutments can cause

- A. increased tooth sensitivity.
- B. gingival recession.
- C. tooth migration.
- D. occlusal prematurities.
- E. All of the above.

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During the fabrication of new complete dentures, which of the following can be modified to achieve the desired occlusion?

1. The compensating curve.
2. The orientation of the occlusal plane.
3. The cusp inclination.
4. The condylar inclination.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

At his first post insertion appointment, a patient with a new removable partial denture complains of a tender abutment tooth. The most likely cause is

- A. overextended borders of the partial.
- B. inadequate polishing of the framework.
- C. improper path of insertion.
- D. the occlusion.

In the design of a removable partial denture, guiding planes are made

- A. parallel to the long axis of the tooth.
- B. parallel to the path of insertion.
- C. at a right angle to the occlusal plane.
- D. at a right angle to the major connector.

Which of the following should be checked first when a cast gold crown that fits on its die cannot be seated on its abutment?

- A. The occlusal contacts.
- B. The taper of the preparation.
- C. The proximal contacts.
- D. The impression used to pour the cast.

Alginate hydrocolloids

- A. shrink when stored in air.
- B. show syneresis.
- C. expand when stored in water.
- D. All of the above.

Following the insertion of complete dentures, a generalized soreness over the entire mandibular alveolar ridge can be caused by

- A. Inadequate interocclusal distance.
- B. impingement on the buccal frenum.
- C. high muscle attachments.
- D. excess border thickness.

A metal in the wrought condition differs from the same metal in the cast condition in that

- A. the grains are deformed and elongated.
- B. the yield strength and hardness are increased.
- C. if heated sufficiently, recrystallization can occur.
- D. All of the above.

Dental porcelain has

1. low compressive strength.
2. high hardness.
3. high tensile strength.
4. low impact strength.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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Which of the following structures affects the thickness of the flange of a maxillary complete denture?

- A. Malar process.
- B. Coronoid process.
- C. Mylohyoid ridge.
- D. Zygomatic process.
- E. Genial tubercle.

Upon examination of an edentulous patient, it is observed that the tuberosities contact the retromolar pads at the correct occlusal vertical dimension. The treatment of choice is to

- A. reduce the retromolar pads surgically to provide the necessary clearance.
- B. reduce the tuberosities surgically to provide the necessary clearance.
- C. construct new dentures at an increased occlusal vertical dimension to gain the necessary clearance.
- D. proceed with construction of the denture and reduce the posterior extension of the mandibular denture to eliminate interferences.

Gold contributes which of the following properties to a gold-copper alloy?

- A. Corrosion resistance.
- B. Increased strength.
- C. Lowered specific gravity.
- D. Increased hardness.

Gold casting alloys are classified as Type I-IV according to which of the following physical properties?

- A. Percentage of gold present in the alloy.
- B. Surface hardness.
- C. Melting point.
- D. Elastic strength.
- E. Ductility.

A maxillary complete denture exhibits more retention and stability than a mandibular one because it

- 1. covers a greater area.
- 2. incorporates a posterior palatal seal.
- 3. is not subject to as much muscular displacement.
- 4. is completely surrounded by soft tissue.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The purpose of relining a distal saddle of a removable partial denture is to improve

- 1. tissue adaptation.
- 2. occlusion.
- 3. function.
- 4. fit of the framework.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

The prime advantage of vacuum firing of porcelain is

- A. better colour.
- B. less shrinkage.
- C. more translucency.
- D. increased strength.

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After initial setting, a chemically cured glass ionomer cement restoration should have a coating agent applied to

- A. hasten the final set.
- B. protect the cement from moisture.
- C. retard the final set.
- D. protect the cement from ultraviolet light.
- E. create a smooth finish.

Heat treatment alters a gold alloy's

- A. hardness.
- B. proportional limit.
- C. percentage elongation.
- D. All of the above.

The location of a crown margin is determined by

- 1. esthetic requirements.
  - 2. clinical crown length.
  - 3. presence of caries.
  - 4. presence of an existing restoration.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following muscles has two separate functions in mandibular movement?

- A. Masseter.
- B. Geniohyoid.
- C. External (lateral) pterygoid.
- D. Buccinator.

A lowering of serum calcium is the stimulus for the endogenous release of

- A. thyroid hormone.
- B. adrenocortical hormone.
- C. insulin.
- D. parathyroid hormone.
- E. adrenalin.

Dental plaque developing on tooth surfaces will result in

- A. demineralization of enamel.
- B. periodontal disease.
- C. amelogenesis imperfecta.
- D. A. and B.

The microorganism most commonly associated with root surface caries is

- A. Actinomyces viscosus.
- B. Streptococcus mutans.
- C. Streptococcus salivarius.
- D. Lactobacillus acidophilus.

Which of the following bacterial products have been implicated in the initiation of inflammatory periodontal disease?

- 1. Protease.
  - 2. Hyaluronidase.
  - 3. Neuraminidase.
  - 4. Endotoxin.
  - 5. Desoxyribonuclease.
- A. (1) and (2)
  - B. (1) (2) (4)
  - C. (2) (3) (4)
  - D. (2) (3) (5)
  - E. (3) (4) (5)

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In long-standing gingivitis, the subgingival microflora shifts toward

- A. aerobic bacteria.
- B. Gram-positive bacteria.
- C. Gram-negative anaerobic bacteria.
- D. None of the above.

Which of the following condition(s) increase(s) susceptibility to dental caries?

- 1. Vitamin K deficiency during tooth development.
  - 2. Vitamin D deficiency during tooth development.
  - 3. Hereditary fructose intolerance.
  - 4. Hyposalivation.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following is the greatest risk factor for rampant caries in children?

- A. Frequent ingestion of polysaccharides.
- B. Frequent ingestion of high sucrose-containing foods.
- C. Severe enamel hypoplasia.
- D. Deficiency of vitamin D.

Which of the following, if left untreated, is most likely to result in a periapical lesion?

- A. Internal resorption.
- B. Reversible pulpitis.
- C. Acute suppurative pulpitis.
- D. Chronic hyperplastic pulpitis.
- E. Diffuse calcification of the pulp.

Using pins to retain amalgam restorations increases the risk of

- 1. cracks in the teeth.
  - 2. pulp exposures.
  - 3. thermal sensitivity.
  - 4. periodontal ligament invasion.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

In pin-retained restorations, the pin holes should be parallel to the

- A. long axis of the tooth.
- B. nearest external surface.
- C. pulp chamber.
- D. axial wall.

Enlargement of the thyroid gland can be caused by

- A. insufficient fluoride.
- B. excess iodine.
- C. insufficient iodine.
- D. excess calcium.
- E. excess sodium.

Cements used as cavity liners

- A. provide a barrier to the passage of irritants from restorative materials.
- B. reduce sensitivity of freshly cut dentin.
- C. provide thermal insulation to the pulp.
- D. All of the above.

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Which of the following conditions is characterized by abnormally large pulp chambers?

- A. Amelogenesis imperfecta.
- B. Regional odontodysplasia.
- C. Dentinogenesis imperfecta.
- D. Dentinal dysplasia Type I.

Which of the following has the highest rate of recurrence?

- A. Odontogenic keratocyst.
- B. Nasoalveolar cyst.
- C. Median palatal cyst.
- D. Incisive canal cyst.

Hyperplastic lingual tonsils may resemble which of the following?

- A. Epulis fissuratum.
- B. Lingual varicosities.
- C. Squamous cell carcinoma.
- D. Median rhomboid glossitis.
- E. Prominent fungiform papillae.

In the bisecting angle principle of intraoral radiography, the radiopacity that can obliterate the apices of maxillary molars is the

- A. maxillary sinus.
- B. palatine bone and the zygoma.
- C. orbital process of the zygomatic bone.
- D. zygoma and the zygomatic process of the maxilla.

Radiographically, the lamina dura is a

- A. thick layer of bone forming the inner surface of the alveolus.
- B. thin radiolucent line around the roots of the teeth.
- C. thick layer of cortical bone.
- D. thin radiopaque line around the roots of the teeth.

The anatomical landmarks used to help establish the location of the posterior palatal seal of a maxillary complete denture include the

- A. pterygomaxillary notches and the fovea palatinae.
- B. pterygomaxillary notches and the posterior nasal spine.
- C. posterior border of the tuberosities and the posterior border of the palatine bone.
- D. anterior border of the tuberosities, the palatine raphe and the posterior border of the palatine bone.

Irreversible hydrocolloid materials are best removed from the mouth by

- A. a quick snap.
- B. a slow teasing motion.
- C. twisting and rocking.
- D. having the patient create a positive pressure.

To improve denture stability, mandibular molar teeth should normally be placed

- A. over the crest of the mandibular ridge.
- B. buccal to the crest of the mandibular ridge.
- C. over the buccal shelf area.
- D. lingual to the crest of the mandibular ridge.

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Upon setting, a mixture of plaster of Paris and water will exhibit

- A. loss in compressive strength.
- B. expansion.
- C. gain in moisture content.
- D. contraction.

Prevention of gingival irritation by a major connector of a removable partial denture is accomplished by

- A. using split palatal bars.
- B. reducing the size of the connector.
- C. ensuring maximum distribution of occlusal forces.
- D. providing relief between the connector and the gingiva.

Extreme resorption of an edentulous mandible can bring the alveolar ridge to the level of the attachment of the

- A. buccinator, styloglossus and geniohyoid muscles.
- B. mylohyoid, buccinator and styloglossus muscles.
- C. superior constrictor, mylohyoid and buccinator muscles.
- D. mylohyoid, buccinator and genioglossus muscles.

Before performing surgery on a patient who is taking warfarin, which of the following should be evaluated?

- A. Bleeding time.
- B. Clotting time.
- C. Prothrombin time.
- D. Coagulation time.

Normal sulcular epithelium in man is

- 1. nonkeratinized.
  - 2. squamous.
  - 3. stratified.
  - 4. nonpermeable.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Tachycardia is a term which describes a pulse rate of

- A. less than 50.
- B. less than 60.
- C. less than 70.
- D. more than 70.

Juvenile periodontitis

- A. is associated with gram-negative anaerobic flora.
- B. is associated with gram-positive anaerobic flora.
- C. is associated with root caries.
- D. has a definite predilection toward males.

The severity of the course of periodontal disease depends upon the

- A. resistance of the host.
- B. virulence of the organism.
- C. number of organisms present.
- D. A. and B.
- E. A., B. and C.

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Filters are placed in the path of the x-ray beam to

- A. increase contrast.
- B. reduce film density.
- C. reduce exposure time.
- D. reduce patient radiation dose.

Which of the following modifications to the standard procedure for mixing gypsum products will increase the compressive strength of the set material?

- A. Adding a small amount of salt to the water before mixing.
- B. Decreasing the water/powder ratio by a small amount.
- C. Using warmer water.
- D. Decreasing the mixing time.

Which of the following properties apply to glass ionomer cements?

- 1. Chemical bonding to etched dentin.
  - 2. Non-irritating to pulpal tissue at moderate depth.
  - 3. Anticariogenic because of fluoride release.
- A. (1) only
  - B. (1) and (2)
  - C. (1) and (3)
  - D. All of the above.

When gold or a gold alloy changes from a liquid to a solid state it

- A. expands.
- B. contracts.
- C. corrodes.
- D. becomes brittle.
- E. work hardens.

Particulate hydroxyapatite, when placed subperiostally,

- 1. is highly biocompatible.
- 2. has a low incidence of secondary infection following surgery.
- 3. has a tendency to migrate following insertion.
- 4. induces bone formation throughout the implanted material.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

A characteristic sign of aggressive periodontitis in an adolescent (juvenile periodontitis) is

- A. marginal gingivitis.
- B. painful, burning gingivae.
- C. hyperplastic gingivitis.
- D. drifting of the teeth.

To ensure maximum marginal strength for an amalgam restoration the cavosurface angle should

- A. approach 45 degrees.
- B. approach 90 degrees.
- C. be bevelled.
- D. be chamfered.

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Planing the enamel at the gingival cavosurface of a Class II amalgam preparation on a permanent tooth

- A. should result in a long bevel.
- B. is contraindicated because of the low edge strength of amalgam.
- C. is unnecessary since the tooth structure in this area is strong.
- D. should remove unsupported enamel which may fracture.
- E. should result in a sharp gingivoproximal line angle.

The area of the tooth that is most sensitive during cavity preparation is

- A. dentin.
- B. cementum.
- C. cements enamel junction.
- D. dentinoenamel junction.

Which of the following is/are (a) useful guide(s) in determining a patient's occlusal vertical dimension?

- 1. Appearance.
  - 2. Phonetics.
  - 3. Observation of the rest position.
  - 4. Pre-extraction profile records.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only.
  - E. All of the above.

In partial denture design, the major connector should

- A. rigidly connect the bilateral components.
- B. act as a stress-breaker.
- C. not interfere with lateral forces.
- D. dissipate vertical forces.

A patient with complete dentures complains of clicking. The most common causes are

- A. reduced vertical dimension and improperly balanced occlusion.
- B. excessive vertical dimension and poor retention.
- C. use of too large a posterior tooth and too little horizontal overlap.
- D. improper relation of teeth to the ridge and excessive anterior vertical overlap.

In patients wearing complete dentures, the most frequent cause of tooth contact (clicking) during speaking is

- A. nervous tension.
- B. incorrect centric relation position.
- C. excessive occlusal vertical dimension.
- D. lack of vertical overlap.
- E. unbalanced occlusion.

The best means of extending the working time of an irreversible hydrocolloid impression material is to

- A. extend spatulation time.
- B. add additional water.
- C. use cold water.
- D. add a small amount of borax.
- E. add potassium sulfate.

In an infection caused by non-penicillinase producing staphylococcus, the drug of choice is

- A. penicillin V.
- B. cephalixin.
- C. tetracycline.
- D. vancomycin.

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Intravenous administration of epinephrine results in

1. increased systolic pressure.
  2. increased heart rate.
  3. palpitations.
  4. respiratory depression.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Antibiotic prophylaxis is recommended for patients with which of the following?

1. Mitral valve prolapse with regurgitation.
  2. Cardiac pacemaker.
  3. Prosthetic heart valves.
  4. All heart murmurs.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Water irrigation devices have been shown to

- A. eliminate plaque.  
B. dislodge food particles from between teeth.  
C. disinfect pockets for up to 18 hours.  
D. prevent calculus formation.

When cementing an inlay, the best procedure to ensure accurate seating is a

- A. continuous firm pressure on the inlay until the cement is set.  
B. thick mix of cement.  
C. rapid and heavy application of pressure until the inlay is seated.  
D. very thin mix of cement.

The most common cause of malocclusion with a Class I molar relationship is

- A. a thumbsucking habit.  
B. crossbite in the posterior segments.  
C. tooth size and jaw size discrepancy.  
D. improper eruption of permanent first molars.

Which of the following conditions should NOT commonly be treated during the mixed dentition stage?

- A. Anterior cross-bite.  
B. Posterior cross-bite.  
C. Maxillary incisor rotation.  
D. Class II molar relationship.

The most frequent cause of tooth loss in the elderly is

- A. bruxism.  
B. caries.  
C. periodontal disease.  
D. use of a removable partial denture.  
E. extraoral trauma.

Which of the following is the LEAST likely primary site for the development of oral squamous cell carcinoma in the elderly?

- A. Dorsum of the tongue.  
B. Floor of the mouth.  
C. Lateral border of the tongue.  
D. Tonsillar fossa.

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In the management of a patient with an acute odontogenic infection, the treatment should include:

1. elimination of the cause.
  2. drainage.
  3. supportive therapy.
  4. tetanus immunization.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A surgical flap not repositioned over a bony base will result in

1. slower healing.
  2. foreign body inflammatory reaction.
  3. wound dehiscence.
  4. necrosis of bone.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

Benign neoplasms

1. grow slowly.
  2. are generally painless.
  3. can be managed conservatively.
  4. can metastasize.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A removable orthodontic appliance, producing a light force on the labial of a proclined maxillary central incisor will cause

- A. lingual movement of the crown and lingual movement of the root apex.  
B. intrusion of the central incisor and lingual movement of the crown.  
C. lingual movement of the crown and labial movement of the root apex.  
D. intrusion of the central incisor.

In acutely inflamed gingival tissue, there is an increase in the

- A. number of mast cells.  
B. number of plasma cells.  
C. level of histamine.  
D. A. and B.  
E. A. and C.

In clinical dentistry, stiffness of wire is a function of

- A. length of the wire segment.  
B. diameter of the wire segment.  
C. alloy composition.  
D. All of the above.  
E. None of the above.

The choice and number of abutments for a fixed partial denture is influenced by the

1. length of the span of the fixed partial denture.
  2. crown-root ratio of the abutments.
  3. amount of periodontal support of the abutments.
  4. position of the abutments in the arch.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

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Which of the following pharmacokinetic change(s) occur(s) with aging?

1. Absorption is altered by a decrease in the gastric pH.
  2. Metabolism is decreased by a reduced liver mass.
  3. Distribution is altered by a decrease in total body fat.
  4. Excretion is reduced because of lessened renal blood flow.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

When using the periodontal probe to measure pocket depth, the measurement is taken from the

- A. base of the pocket to the cementoenamel junction.  
B. free gingival margin to the cementoenamel junction.  
C. base of the pocket to the crest of the free gingiva.  
D. base of the pocket to the mucogingival junction.

A hinge axis facebow records

- A. Bennett angle.  
B. centric relation.  
C. lateral condylar inclination.  
D. horizontal condylar inclination.  
E. opening and closing axis of the mandible.

Compared to unfilled resins, composite resins have

1. reduced thermal dimensional changes.
  2. increased strength.
  3. reduced polymerization shrinkage.
  4. better polishability.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The junctional epithelium, once it has migrated apically, attaches to the cementum by means of

- A. collagen fibres.  
B. oxytalan fibres.  
C. desmosomes.  
D. hemidesmosomes.

Premature loss of a primary maxillary second molar usually produces a malocclusion in the permanent dentition that is characterized by

- A. anterior crowding.  
B. labially displaced maxillary canines.  
C. delayed eruption of the permanent first molar.  
D. a Class II molar relationship on the affected side.  
E. a Class III molar relationship on the affected side.

An anterior cross-bite of a permanent maxillary incisor in a mixed dentition is often associated with

- A. a functional shift.  
B. unexplainable genetic factors.  
C. lingually situated supernumerary teeth.  
D. prolonged retention of a primary incisor.  
E. premature eruption of a maxillary incisor.

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Excessive orthodontic force used to move a tooth may

1. cause hyalinization.
  2. cause root resorption.
  3. crush the periodontal ligament.
  4. impair tooth movement.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The predominant type of movement produced by a finger spring on a removable appliance is

- A. torque.  
B. tipping.  
C. rotation.  
D. translation.

Following loss of a permanent mandibular first molar at age 8, which of the following changes are likely to occur?

1. Distal drift of second premolar.
  2. No movement of second premolar.
  3. Mesial drift of second permanent molar.
  4. No movement of second permanent molar.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

The best space maintainer to prevent the lingual collapse that often occurs following the early loss of a mandibular primary canine is a

- A. Nance expansion arch.  
B. lingual arch.  
C. band and loop space maintainer.  
D. distal shoe space maintainer.

Recurring tooth rotations occur most frequently after orthodontic correction due to

- A. density of the cortical bone.  
B. persistence of tongue and finger habits.  
C. free gingival and transseptal fibres.  
D. oblique fibres of the periodontal ligament.

The design of a mucoperiosteal flap should

1. provide for visual access.
  2. provide for instrument access.
  3. permit repositioning over a solid bone base.
  4. be semilunar in shape.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

In the surgical removal of an impacted mandibular third molar, which of the following would be considered to be the most difficult?

- A. Mesio-angular.  
B. Horizontal.  
C. Vertical.  
D. Disto-angular.

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Titanium implants in the oral cavity are CONTRAINDICATED for patients who

- A. are over age 75.
- B. are on thyroid replacement therapy.
- C. have a terminal disease.
- D. have diabetes mellitus (controlled).

Cultures made from a dental abscess indicate the infection is caused by beta hemolytic streptococcus. Which of the following is the drug of choice?

- A. Penicillin.
- B. Erythromycin.
- C. Tetracycline.
- D. Cloxacillin.

Which one of the following describes the position of the needle tip during administration of local anesthetic for the inferior alveolar nerve block?

- A. Anterior to the pterygomandibular raphe.
- B. Medial to the medial pterygoid muscle.
- C. Superior to the lateral pterygoid muscle.
- D. Lateral to the sphenomandibular ligament.

During dental treatment, a 62 year old insulin-dependent diabetic, suddenly complains of severe, crushing, retrosternal pain. The appropriate initial management would be to stop treatment and

- 1. administer sublingual nitroglycerin.
  - 2. administer 100% oxygen.
  - 3. monitor the patient.
  - 4. administer 50% dextrose intravenously.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following affect(s) polymerization of visible light cured composite resins?

- 1. Intensity of the light source.
- 2. Thickness of composite resin.
- 3. Proximity of light source.
- 4. Shade of composite resin.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

In order to achieve a proper interproximal contact when using a spherical alloy, which of the following is/are essential?

- 1. A larger sized condenser.
- 2. A thinner matrix band.
- 3. An anatomical wedge.
- 4. Use of mechanical condensation.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following cements can chemically bond to enamel?

- 1. Zinc phosphate cement.
- 2. Polycarboxylate cement.
- 3. Ethoxy benzoic acid cement.
- 4. Glass ionomer cement.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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The "smear layer" is an important consideration in

- A. plaque accumulation.
- B. caries removal.
- C. pulp regeneration.
- D. dentin bonding.

A 22 year old presents with a fracture of the incisal third of tooth 2.1 exposing a small amount of dentin. The fracture occurred one hour previously. There is no mobility of the tooth but the patient complains that it is rough and sensitive to cold. The most appropriate emergency treatment is to

- A. open the pulp chamber, clean the canal and temporarily close with zinc oxide and eugenol.
- B. smooth the surrounding enamel and apply glass ionomer cement.
- C. smooth the surrounding enamel and apply a calcium hydroxide cement.
- D. place a provisional (temporary) crown.

Zinc phosphate cement, when used as a luting agent for cast restorations, has which of the following properties?

- 1. Insolubility.
- 2. Anticariogenicity.
- 3. Chemical adhesion.
- 4. Mechanical retention.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

As a dentist in Canada, it is ethical to refuse to treat a patient on the basis of

- 1. religious beliefs.
- 2. physical handicap.
- 3. infectious disease.
- 4. recognition of lack of skill or knowledge.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

For which of the following teeth is the risk of root fracture increased if a rotational force is used during extraction?

- A. Upper canine.
- B. Lower canine.
- C. Upper first bicuspid.
- D. Lower first bicuspid.
- E. Upper lateral incisor.

Which of the following systemic diseases does/do NOT predispose a patient to periodontitis?

- 1. Cyclic neutropenia.
- 2. Diabetes mellitus.
- 3. Acquired immunodeficiency syndrome.
- 4. Hereditary hypohydrotic ectodermal dysplasia.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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A lateral cephalometric radiograph for a patient with a 3mm anterior functional shift should be taken with the patient in

- A. maximum intercuspation.
- B. initial contact.
- C. normal rest position.
- D. maximum opening.
- E. protrusive position.

Physiologic (racial) pigmentation differs from melanoma because melanoma

- A. is macular.
- B. contains melanin.
- C. affects the gingiva.
- D. undergoes clinical changes.

Which articular disease most often accompanies Sjögren's syndrome?

- A. Suppurative arthritis.
- B. Rheumatoid arthritis.
- C. Degenerative arthrosis.
- D. Psoriatic arthritis.
- E. Lupus arthritis.

A patient with a tumor in the right infratemporal fossa shows a significant shift of the mandible to the right when opening. Which nerve is involved?

- A. Facial nerve VII.
- B. Glossopharyngeal nerve IX.
- C. Trigeminal nerve V.
- D. Hypoglossal nerve XII.

Which two muscles are involved in sucking?

- A. Caninus and depressor angularis.
- B. Risorius and buccinator.
- C. Buccinator and orbicularis oris.
- D. Levator labii superioris and zygomaticus major.

Following root planing, a patient experiences thermal sensitivity. This pain is associated with which of the following?

- A. Golgi receptor.
- B. Free nerve endings.
- C. Odontoblastic processes.
- D. Cementoblasts.

A 45 year old, overweight man reports that his wife complains that he snores. The initial management of the patient's snoring problem is to

- A. fabricate an appliance to reduce snoring.
- B. fabricate restorations to increase the patient's vertical dimension of occlusion.
- C. refer for an orthognathic surgery consultation.
- D. refer for a sleep assessment.

The most appropriate treatment of necrotizing ulcerative periodontitis (NUP) in a patient with no fever and no lymphadenopathy is

- 1. periodontal debridement.
  - 2. antibiotic therapy.
  - 3. oral hygiene instruction.
  - 4. topical steroid therapy.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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In periodontal therapy, “guided tissue regeneration” is most successful in treating

1. horizontal bone loss.
2. a 3-walled infrabony defect.
3. a mandibular Class III furcation involvement.
4. a mandibular Class II furcation involvement.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only.
- E. All of the above.

The most likely cause of tooth loss following a tunneling procedure to provide complete access for a mandibular Class III furcation involvement is

- A. root caries.
- B. root sensitivity.
- C. pulpal involvement.
- D. recurrent pocketing.

For an otherwise healthy patient, with an acute localized periodontal abscess, initial treatment must include

- A. scaling and root planing.
- B. occlusal adjustment.
- C. prescription of an antibiotic.
- D. prescription of an analgesic.

On bite-wing radiographs of adults under the age of 30, the normal alveolar crest is

- A. at the cemento enamel junction.
- B. 1-2mm apical to the cemento enamel junction.
- C. 3-4mm apical to the cemento enamel junction.
- D. not clearly distinguishable.

Which of the following structures may be associated with the role of the central nervous system in sleep (nocturnal) bruxism?

- A. Basal ganglia (nigrostriatal).
- B. A delta and C nerves.
- C. Sphenopalatine ganglion.
- D. Petrous nerves.

A line angle NOT present on a Class I cavity preparation on tooth 1.6 is

- A. mesiopulpal.
- B. buccopulpal.
- C. linguopulpal.
- D. axiopulpal.
- E. None of the above.

A 23 year old female complains of bilateral stiffness and soreness in the preauricular region. Her symptoms have been present for the past week and are most pronounced in the morning. The most likely cause is

- A. fibrous ankylosis of the temporomandibular joints.
- B. nocturnal bruxism.
- C. early osteoarthritis.
- D. mandibular subluxation.

Which of the following would maximize vitamin E intake following osseous surgery?

- A. Lettuce.
- B. Wheat germ.
- C. Eggs.
- D. Fish.

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Which type of malocclusion should be corrected as early as possible?

- A. Class II Division 1 associated with an anterior open bite.
- B. Class II Division 2 associated with an increased anterior overbite.
- C. Class III associated with an anterior open bite.
- D. Cross-bite associated with a functional shift of the mandible from initial contact to maximum intercuspation.
- E. Anterior open bite associated with a lip or digit sucking habit.

In its classic form, serial extraction is best applied to patients with Class I occlusions with crowding of

- A. less than 10mm in each of the upper and lower arches and 35% overbite.
- B. 10mm or more in each of the upper and lower arches and 35% overbite.
- C. less than 10mm in each of the upper and lower arches and 70% overbite.
- D. 10mm or more in each of the upper and lower arches and 70% overbite.

The maxillary cast partial denture major connector design with the greatest potential to cause speech problems is

- A. a thick narrow major connector.
- B. an anterior and a posterior bar.
- C. a thin broad palatal strap.
- D. narrow horseshoe shaped.

Immediately following a left posterior superior alveolar nerve block injection, the patient's face becomes quickly and visibly swollen on the left side. The immediate treatment should be to

- 1. apply a cold compress.
- 2. administer 0.3mg epinephrine (sublingually).
- 3. apply pressure.
- 4. refer for immediate medical treatment.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

If a person falls from a bicycle, striking the chin, the most likely region(s) of the mandible to fracture is/are:

- 1. Symphysis.
- 2. Condylar necks.
- 3. Mid-body.
- 4. Angles of the mandible.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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If a patient loses a permanent maxillary first molar before the age of 11, the

1. premolar drifts distally.
  2. maxillary second molar erupts and moves mesially.
  3. opposing tooth erupts into the space created.
  4. overbite increases.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

In a dental office, all of the following should be used to reduce the risk of Hepatitis B infection for staff and patients EXCEPT

- A. steam sterilization.  
B. chemical sterilization.  
C. standard precautions.  
D. medical history.  
E. staff education.

A 45 year old with insulin dependent diabetes mellitus comes for a morning dental appointment. During the examination, the patient complains of being lightheaded and weak. Sweating is observed. The patient is most likely experiencing

- A. hyperglycemia.  
B. hypoglycemia.  
C. syncope.  
D. hyperventilation.  
E. cerebrovascular accident.

Following root canal therapy, the most desirable form of tissue response at the apical foramen is

- A. cementum deposition.  
B. connective tissue capsule formation.  
C. epithelium proliferation from the periodontal ligament.  
D. dentin deposition.

While the teeth are set in wax, dentures are tried in to

- A. verify the maxillomandibular records.  
B. verify the vertical dimension of occlusion.  
C. evaluate esthetics.  
D. All of the above.

Hypothyroidism in adults is associated with

- A. exophthalmos.  
B. weight loss.  
C. generalized edema.  
D. tachycardia.  
E. mental defects.

A lower molar requiring a crown has an amalgam restoration extending 1.0mm subgingivally. The crown is most appropriately placed

- A. on the existing amalgam.  
B. at the amalgam/tooth junction.  
C. 1mm apical to the amalgam margin.  
D. 2mm apical to the amalgam margin.

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A patient presents with a 3 week history of prolonged tooth pain to hot and cold. Three days ago the symptoms changed to moderate pain on biting combined with a dull, spontaneous ache relieved by cold. The most likely diagnosis is

- A. chronic apical abscess.
- B. a cracked tooth.
- C. pulpal necrosis.
- D. reversible pulpitis.
- E. a vertical root fracture.

Root caries risk in adults is

- 1. associated with previous enamel caries experience.
  - 2. reduced in communities with fluoridated water.
  - 3. greater in adults who have high *streptococcus mutans* counts.
  - 4. similar in institutionalized and non-institutionalized patients.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Normal aging changes in the hard tooth tissues include

- 1. continuous deposition of cementum.
  - 2. continuous deposition of dentin.
  - 3. decreased blood supply to the pulp.
  - 4. increased porosity of enamel.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

An 8 year old patient with all primary molars still present exhibits a cusp-to-cusp relationship of permanent maxillary and mandibular first molars and good alignment of the lower incisors. The management of this patient should be to

- A. refer for orthodontic consultation.
- B. use a cervical headgear to reposition maxillary molars.
- C. disk the distal surfaces of primary mandibular second molars.
- D. place patient on appropriate recall schedule.

A smooth, elevated, red patch devoid of filiform papillae, located in the midline of the dorsum of the tongue immediately anterior to the circumvallate papillae is indicative of

- A. benign migratory glossitis.
- B. median rhomboid glossitis.
- C. a granular cell tumor.
- D. iron deficiency anemia.
- E. a fibroma.

A 20 year old female patient is suspected of having bulimia. Which of the following signs will help confirm the diagnosis?

- 1. Enamel erosion of maxillary anterior teeth.
  - 2. Enlargement of the thyroid gland.
  - 3. Calluses on the dorsum of the fingers.
  - 4. Bulky clothing to disguise weight loss.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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Upon stimulation of salivary flow, which gland is the main source of salivary volume?

- A. Submandibular.
- B. Submaxillary.
- C. Sublingual.
- D. Parotid.

Which of the following sweeteners used in sugarless gum is most effective in preventing caries?

- A. Xylitol.
- B. Sorbitol.
- C. Mannitol.
- D. Glycerol.

The best way for a dentist to ensure efficacy in a disinfection solution is to

- A. make a fresh solution every day.
- B. follow the manufacturer's instructions.
- C. increase the concentration of the product.
- D. increase the time of contact with the product.

A patient presents with hypodontia, conical teeth, fine, scanty, fair hair, and an intolerance to hot weather. The most likely diagnosis is

- A. achondroplasia.
- B. malignant hyperthermia.
- C. ectodermal dysplasia.
- D. cystic fibrosis.

Which of the following is a possible cause for a low density radiograph (light film)?

- A. Cold developer.
- B. Over exposure.
- C. Improper safety light.
- D. Excessive developing time.

Which of the following is necessary for collagen formation?

- A. Vitamin A.
- B. Vitamin C.
- C. Vitamin D.
- D. Vitamin E.
- E. Vitamin K.

Lacrimation and flushing of the face are autonomic phenomena that are occasionally associated with trigeminal neuralgia involving the maxillary nerve. This can be explained by the nerve's association with which ganglion?

- A. Pterygopalatine.
- B. Submandibular.
- C. Trigeminal.
- D. Otic.
- E. Nasociliary.

The washing of hands must be performed before putting on and after removing gloves because it

1. reduces the number of skin bacteria which multiply and cause irritation.
2. completely eliminates skin bacteria.
3. minimizes the transient bacteria which could contaminate hands through small pinholes.
4. allows gloves to slide on easier when the hands are moist.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

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A recommended method for disinfecting alginate impressions is to immerse the impression for 10 minutes in

- A. a complex phenolic.
- B. 2% glutaraldehyde.
- C. 10% ethyl alcohol.
- D. a 1:10 dilution of sodium hypochlorite.

The best way to protect the abutments of a Class I removable partial denture from the negative effects of the additional load applied to them is by

- A. splinting abutments with adjacent teeth.
- B. keeping a light occlusion on the distal extensions.
- C. placing distal rests on distal abutments.
- D. using cast clasps on distal abutments.
- E. regular relining of the distal extensions.

Healthy attached gingiva

- A. has no basal cell layer.
- B. is closely bound to underlying periosteum.
- C. contains elastic fibers.
- D. has no rete pegs.

The angle SNA can be used to evaluate the

- A. maxillary protrusion.
- B. overbite.
- C. upper incisor inclination.
- D. facial height.
- E. mandibular angle.

A survey of the master cast shows that the 3.5 and 3.7 abutments for a fixed partial denture have different paths of insertion with respect to 3.7. A semi-precision attachment is chosen rather than preparing the teeth again. Where should the male part of the attachment ideally be located?

- A. Distal of the 3.5 retainer.
- B. Distal of the 3.6 pontic.
- C. Mesial of the 3.7 retainer.
- D. Mesial of the 3.6 pontic.

A patient with pain, fever and unilateral parotid swelling following a general anesthetic most likely has

- A. Mumps.
- B. sialolithiasis.
- C. acute bacterial sialadenitis.
- D. Sjögren's syndrome.
- E. sarcoidosis.

Hutchinson's incisors and mulberry molars are associated with

- A. congenital porphyria.
- B. fluorosis.
- C. rickets.
- D. congenital syphilis.
- E. cleidocranial dysplasia.

Which of the following diseases may cause an enlargement of the jaws, development of diastemas and/or a poorly fitting denture?

- A. Phantom bone disease.
- B. Rickets.
- C. Paget's disease.
- D. Osteoporosis.
- E. Hypophosphatasia.

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Multiple “punched-out” radiolucencies of the skull and jaws are most commonly seen with

- A. metastatic carcinoma.
- B. plasmacytoma.
- C. multiple myeloma.
- D. chondrosarcoma.
- E. osteosarcoma.

Crusted hemorrhagic and ulcerative lesions of the lips in a patient with target-like skin lesions are typical of

- A. lupus erythematosus.
- B. Reiter’s syndrome.
- C. Behçet’s syndrome.
- D. erythema multiforme.
- E. pemphigus vulgaris.

Soft tissue pockets CANNOT be reduced by

- A. occlusal adjustment.
- B. scaling and root planing (debridement).
- C. open flap curettage.
- D. guided tissue regeneration.

Which of the following is NOT a risk factor for periodontitis?

- A. Smoking.
- B. Poorly controlled diabetes.
- C. Coronary heart disease.
- D. Poor oral hygiene.

Patients who have gingival enlargements surgically removed should be forewarned that there is a high incidence of

- A. altered taste sensation.
- B. dentinal hypersensitivity.
- C. reoccurrence of gingival enlargement.
- D. post-operative swelling.

In composite resin restorations, glass ionomer cements can be used as a base because they are

- A. sedative to a hyperemic pulp.
- B. neutral in colour.
- C. biocompatible.
- D. compatible with the expansion of composite resins.

For an acid-etched Class III composite resin, the cavosurface margin of the cavity can be bevelled to

- A. eliminate the need for internal retention.
- B. improve convenience form.
- C. aid in finishing.
- D. increase the surface area for etching.

Alteration of the intestinal flora by some chemotherapeutic agents can interfere with reabsorption of a contraceptive steroid thus preventing the recirculation of the drug through the enterohepatic circulation. Which of the following can interfere with this mechanism?

- 1. Codeine.
  - 2. Penicillin V.
  - 3. Acetaminophen.
  - 4. Tetracycline.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

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After initiating preventive management for a 16 year old patient with multiple extensive carious lesions, which of the following restorative treatments is most appropriate?

- A. Place amalgam restorations over the next few months.
- B. Excavate caries and place temporary restorations within the next few weeks.
- C. Delay any treatment until the hygiene improves.
- D. Restore all teeth with composite resin over the next few months.

When exposing radiographic film, the amount of radiation received by the patient is best reduced by

- A. collimation.
- B. decreased object-film distance.
- C. low kVp correlated with high milliamperage.
- D. decreased target-object distance.

Cleft lip and palate usually result from

- A. failure of proper union of the median and lateral nasal processes.
- B. failure of the union of the median nasal process with the lateral nasal and maxillary processes.
- C. anhidrotic ectodermal dysplasia.
- D. failure of development of both the lateral nasal and maxillary processes.

Enamel pearls form when

- A. ameloblasts migrate apically down the root.
- B. cells of the epithelial root sheath do not migrate away from the dentin.
- C. cells of the dental follicle fail to develop.
- D. epithelial rests transform into ameloblast vesicles.

During tooth development, epithelial mesenchymal interactions function

- A. only at the initial stages when tooth positions are being laid down.
- B. through the exchange of small molecules.
- C. when preameloblasts signal preodontoblasts to start producing dentin.
- D. only with epithelium and mesenchyme from tooth-forming regions.

Shortly after the administration of a local anesthetic for the removal of tooth 2.8, the patient complains of a tense sensation in the left cheek and left cheek swelling is observed. The most likely diagnosis is

- A. surgical emphysema.
- B. an immediate allergic reaction.
- C. a herniation of the buccal fat pad.
- D. a hematoma.

Polymerization shrinkage associated with the setting of composite resins is a result of

- A. primary bonds replacing secondary bonds.
- B. reaction by-products evaporating from the set material.
- C. unreacted monomer evaporating from the set material.
- D. temperature changes occurring during the polymerization reaction.

Hypercementosis may be associated with

- A. Paget's disease.
- B. ameloblastoma.
- C. hypophosphatasia.
- D. multiple myeloma.

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A 75 year old male patient whose wife died 10 months ago presents for his recall appointment. Looking wasted and fatigued, he confirms he has lost about 6kg in the last 8 months but is otherwise in good health. The most appropriate management for this patient is to

- A. recommend that he drink 3 cans of a nutritional supplement each day.
- B. refer him to a qualified dietician/nutritionist and follow up after his appointment.
- C. refer him back to his physician requesting a more thorough assessment.
- D. provide him with a copy of Canada's Food Guide to Healthy Eating.

Which foramen presents as an apical radiolucency in the mandibular premolar region?

- A. Lingual.
- B. Mandibular.
- C. Mental.
- D. Incisive.

The mean annual radiation dose equivalent for human populations on earth is approximately

- A. 3 to 4 micro- ( $\mu$ ) Sv.
- B. 3 to 4 milli- (m) Sv.
- C. 3 to 4 Sv.
- D. 3 to 4 k Sv.

Which anatomical structures form the inverted Y (Y line) in maxillary periapical radiographs?

- A. Nasopalatine/incisive canal and floor of the nasal fossa.
- B. Anterior nasal spine and nasopalatine/incisive canal.
- C. Floor of the nasal fossa and maxillary sinus border.
- D. Zygomatic process of the maxilla and maxillary sinus border.

A crown margin can be extended subgingivally when required

- 1. for esthetics.
  - 2. to increase retention.
  - 3. to reach sound tooth structure.
  - 4. for caries prevention.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

The most practical method to significantly reduce the setting time of stone and plaster is to use

- A. warm mixing water.
- B. a calcium sulfate dihydrate nucleating agent.
- C. a sodium sulfate nucleating agent.
- D. a longer mixing time.

Which of the following root surfaces are most likely to have flutings/concavities that will make thorough root debridement difficult?

- A. Mesial of teeth 1.1/2.1.
- B. Mesial of teeth 1.2/2.2.
- C. Mesial of teeth 1.3/2.3.
- D. Mesial of teeth 1.4/2.4.

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The maximum recommended thickness of an incremental composite resin to be light cured is

- A. 2mm.
- B. 3mm.
- C. 4mm.
- D. 5mm.

The most effective agent used to etch enamel and dentin is

- A. 5-10% tartaric acid.
- B. 30-40% phosphoric acid.
- C. 15-20% maleic acid.
- D. 40-50% citric acid.

On a semi-adjustable articulator, the incisal guide table represents

- A. a reference point for the establishment of occlusal vertical dimension.
- B. the anterior equivalent of condylar guidance.
- C. a mechanical equivalent of the horizontal and vertical overlap of the anterior teeth.
- D. the mechanical equivalent of the Curve of Wilson.

The full palatal strap major connector is indicated where

- A. there is a high, narrow palatal vault.
- B. a well-defined, undercut palatal torus is present.
- C. very few teeth remain in a flat or U-shaped arch.
- D. palatal tissue is soft and compressible.

The characteristics of "Group function occlusion" are:

- A. The teeth on the non-working side make contact in lateral excursion.
- B. The teeth on the working side make contact in lateral excursion.
- C. Only canine and lateral incisors make contact in lateral excursion.
- D. The posterior teeth on both sides make contact in lateral excursion.

The line drawn through the occlusal rests of two principal abutments is

- A. survey line.
- B. terminal line.
- C. axis of rotation/fulcrum line.
- D. line of greatest torque.

When a simple tipping force is applied to the crown of a single-rooted tooth, the centre of rotation is located

- A. at the apex.
- B. at the cervical line.
- C. within the apical half of the root.
- D. within the cervical one third of the root.

The leeway space in an 8 year old child

- A. will provide space for eruption of the permanent incisors.
- B. is greater in the maxillary arch than in the mandibular arch.
- C. occurs with premature loss of primary molars.
- D. is approximately 3.5mm in the mandibular arch.
- E. allows accommodation of premolars that are larger than the primary molars.

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Which of the following may result in acetone breath?

- A. Prolonged fasting.
- B. High carbohydrate diet.
- C. High protein diet.
- D. Poor oral hygiene.

Reduced thyroid hormone level in a child is associated with

- A. lack of tooth eruption.
- B. early tooth eruption.
- C. delayed tooth eruption.
- D. supernumerary teeth.

Whooping cough is caused by

- A. bacteria.
- B. a virus.
- C. mycoplasma.
- D. yeast.

During the act of swallowing, the auditory (pharyngotympanic) tube is

- A. opened by the tensor tympani muscle.
- B. closed by the tensor tympani muscle.
- C. opened by the tensor veli palatine muscle.
- D. closed by the levator veli palatine muscle.
- E. closed by the superior constrictor muscle.

Immediately following an inferior alveolar nerve block, the patient exhibits facial paralysis. The needle has penetrated through which ligament?

- A. Sphenomandibular.
- B. Stylomandibular.
- C. Stylohyoid.
- D. Pterygomandibular.

Pain caused by trauma to the oral mucosa would activate

- A. muscle spindles.
- B. low-threshold mechanoreceptors.
- C. nociceptors.
- D. pacinian corpuscles.
- E. merkel disks.

The dentino-enamel junction is the most sensitive portion of a tooth because

- A. free nerve endings terminate on odontoblasts at this region.
- B. odontoblastic processes branch considerably at this region.
- C. ameloblasts make synaptic connections with odontoblasts at this junction.
- D. odontoblastic tubules help convey hydrostatic forces to the pulp cells.

Adjustment of the occlusal plane of natural teeth opposed by a complete or partial denture should be completed

- A. after the teeth have been set on the trial denture.
- B. immediately after making the final casts.
- C. upon delivery of the denture.
- D. after the diagnosis and treatment plan has been established.

Lymphatic spread from a carcinoma on the tip of the tongue would initially involve which nodes?

- A. Submandibular.
- B. Submental.
- C. Deep parotid.
- D. Mastoid.
- E. Jugulo-omohyoid.

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A patient with multiple small bruises (purpura) most likely has a low count of

- A. lymphocytes.
- B. T-cells.
- C. platelets.
- D. erythrocytes.
- E. eosinophils.

The yield strength of an orthodontic wire is

- A. the same as the proportional limit.
- B. decreased by work hardening.
- C. the same as the stress at fracture.
- D. higher than the proportional limit.

Hardening of Type IV cast gold dental alloys by heat treatment increases

- A. ductility.
- B. yield strength.
- C. coring.
- D. elastic modulus.
- E. malleability.

The washing of hands must be performed before putting on and after removing gloves because it

1. reduces the number of skin bacteria which multiply and cause irritation.
2. completely eliminates skin bacteria.
3. minimizes the transient bacteria which could contaminate hands through small pinholes.
4. allows gloves to slide on easier when the hands are moist.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

When odontoblasts are destroyed, new odontoblasts are derived from

- A. existing odontoblasts.
- B. macrophages.
- C. neural crest cells.
- D. undifferentiated cells.

A clinical diagnostic indication of palatal impaction of maxillary permanent canines does NOT include

- A. proclined and laterally flared permanent lateral incisors.
- B. delayed exfoliation of primary canines.
- C. midline central diastema.
- D. lack of canine buccal bulges in a 10 year old patient.

A patient, when in full intercuspation, shows a right side posterior crossbite and a lower midline that is deviated to the right. At initial contact there are bilateral posterior crossbites and coincident midlines. The most likely cause of this finding is

- A. severe temporomandibular dysfunction.
- B. two ideal occlusions.
- C. true unilateral crossbite.
- D. occlusal interference and functional shift.

Accessory canals in permanent teeth are most commonly found in the

- A. cervical third of the root.
- B. middle third of the root.
- C. apical third of the root.

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There is an acute apical abscess (acute periradicular abscess) on tooth 1.3. The tooth must be extracted. In addition to a palatal injection, the most appropriate local anesthetic technique would be

- A. vestibular infiltration.
- B. infraorbital.
- C. middle superior alveolar.
- D. intraligamentary.

When placed into sound dentin, a self-threading pin will

- A. increase tensile strength of an amalgam restoration.
- B. strengthen the amalgam.
- C. cause pulpal inflammation.
- D. increase the retention of an amalgam restoration.

The microorganisms that initially colonize the tooth surface are associated with the genus

- A. Porphyromonas.
- B. Actinobacillus.
- C. Streptococcus.
- D. Prevotella.

Subgingival plaque in deep periodontal pockets consists primarily of

- A. gram-positive microorganisms.
- B. aerobic microorganisms.
- C. gram-negative microorganisms.
- D. viruses.

In the normal periodontium, the alveolar crest lies

- A. 1 to 2mm coronal to the CEJ.
- B. at the CEJ.
- C. 1 to 2mm apical to the CEJ.

The cell-mediated immune response to bacterial plaque in chronic periodontitis is regulated by

- A. neutrophils.
- B. T cells.
- C. B cells.
- D. plasma cells.

Using a high speed dental handpiece WITHOUT water coolant will

- A. produce a smoother surface.
- B. decrease pulpal damage if used with light pressure.
- C. reduce clogging of dental bur.
- D. reduce debris accumulation.
- E. increase frictional heat.

Adrenal corticosteroids

- A. increase heart rate.
- B. cause vasodilation.
- C. increase protein synthesis.
- D. reduce inflammation.

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Periapical infection from a mandibular second molar may spread by direct extension to the

1. buccal space.
2. buccal vestibule.
3. sublingual space.
4. submandibular space.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Composite resin is a satisfactory core material for endodontically treated teeth provided

- A. the resin has a high contrast colour with tooth structure.
- B. there is an adequate ferrule.
- C. the resin is autopolymerizing.
- D. subsequent crown margins are not located on cementum.

Which of the following is consistent with the features of an arrested carious lesion in an occlusal fissure?

- A. A small cavitated lesion with exposed dentin.
- B. A white spot lesion with a frosty surface.
- C. A lesion extending into dentin on a bite-wing radiograph.
- D. A brown spot lesion with a hard surface.

The most important advantage of using reinforced zinc oxide eugenol cement as a temporary restoration is that it

- A. stimulates dentin repair.
- B. occludes dentinal tubules.
- C. desensitizes the pulp.
- D. chelates to tooth structure.

Isthmus fracture during function in a recently placed proximal-occlusal silver amalgam restoration (with occlusal extension through the occlusal fissure system), is most likely due to a preparation with

- A. inadequate isthmus depth.
- B. inadequate isthmus width.
- C. a stepped buccal or lingual wall.
- D. subgingival proximal extension.

The placement of a reverse curve in a Class II amalgam preparation aids in

- A. retention form.
- B. resistance form.
- C. convenience form.
- D. outline form.

An amalgam coronal-radicular core build-up for endodontically treated molar teeth requires

- A. an adequate pulp chamber and ferrule.
- B. a pulp chamber, ferrule and amalgam bonding.
- C. the presence of a post.
- D. the use of retentive threaded pins.

Conventional glass ionomer cements

- A. elicit less pulp response than zinc-oxide and eugenol cements.
- B. do not require a protective liner, such as calcium hydroxide in a deep preparation.
- C. have a lower modulus of elasticity than zinc phosphate cements.
- D. bond mechanically to calcium in enamel and dentin.
- E. are superior to zinc phosphate cement for luting porcelain (all ceramic) crowns.

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In the formulation of composite resins

- A. decreasing filler content increases the modulus of elasticity.
- B. increasing filler content decreases polymerization shrinkage.
- C. increasing filler content increases the degree of conversion.
- D. decreasing filler content increases radiopacity of the restoration.

Most of the problems associated with direct posterior composite resin restorations are related to

- A. high thermal conductivity.
- B. galvanic conduction.
- C. polymerization shrinkage.
- D. poor shade selection.

Postoperative sensitivity associated with the placement of direct posterior composite resin restorations is most often the result of

- A. polymerization shrinkage.
- B. large particle size of macrofilled composite resins.
- C. inadequate etching of the dentin.
- D. excessive thickness of a glass ionomer base.

Which of the following conditions CONTRAINDICATES routine dental treatment in the dental office?

- A. Hypothyroidism.
- B. Recent (15 days) myocardial infarct.
- C. Second trimester pregnancy.
- D. Insulin-dependent diabetes.

Most of the somatosensory information from the oral cavity reaches the brain through which nerve?

- A. Trochlear.
- B. Hypoglossal.
- C. Trigeminal.
- D. Glossopharyngeal.

Astrocytes are cells found in the

- A. brain.
- B. peripheral nerves.
- C. tongue.
- D. blood.

The speed of propagation of action potentials along axons is

- A. faster for myelinated fibres than for unmyelinated fibres.
- B. slower for myelinated fibres than for unmyelinated fibres.
- C. independent of myelination.
- D. independent of the axon diameter.

*Veillonella* species in supragingival plaque

- A. act symbiotically with *S. mutans* to decrease pH and promote caries activity.
- B. convert lactate to acetic and propionic acid.
- C. enhance the progression of caries by metabolizing sucrose.
- D. act as pioneer microorganisms in the development of plaque.

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The risk of contracting hepatitis B following a percutaneous injury from an occupational exposure to the contaminated blood of a patient has been shown to be in the range of

- A. 6-30%.
- B. 35-66%.
- C. 72-90%.

Which of the following is NOT commonly used by general dentists to treat temporomandibular disorders and bruxism?

- A. Hard acrylic splints.
- B. Nonsteroidal anti-inflammatory drugs (NSAIDs).
- C. Corticosteroids.
- D. Muscle relaxants.

The antibiotic of choice for a periradicular dental abscess is

- A. penicillin V.
- B. cephalosporin.
- C. erythromycin.
- D. metronidazole.
- E. ampicillin.

A patient complains of sensitivity following placement of a conservative posterior composite resin restoration. The most probable cause is

- A. acid etching.
- B. polymerization shrinkage.
- C. unpolymerized resin.
- D. prolonged application of the curing light.
- E. inadequate base thickness.

Aging pulps show a relative increase in

- A. sensitivity.
- B. cell numbers.
- C. calcification.
- D. vascularity.

The location and extent of subgingival calculus is most accurately determined clinically by

- A. radiopaque solution used in conjunction with radiographs.
- B. disclosing solution.
- C. probing with a fine instrument.
- D. visual inspection.

In an infrabony pocket, the epithelial attachment is located

- A. within basal bone.
- B. coronal to alveolar bone crest.
- C. apical to alveolar bone crest.

The most likely diagnosis for a child with a painful, fiery-red, diffuse gingivitis is

- A. primary herpetic gingivostomatitis.
- B. aggressive periodontitis.
- C. idiopathic fibromatosis.
- D. aphthous stomatitis.

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Which of the following is/are clinical signs of gingivitis?

1. Loss of stippling.
2. Gingival hyperplasia.
3. Decreased pocket depth.
4. Bleeding on probing.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Regarding dental caries, which of the following is correct?

- A. All carbohydrates are equally cariogenic.
- B. More frequent consumption of carbohydrates increases the risk.
- C. The rate of carbohydrate clearance from the oral cavity is not significant.
- D. Increased dietary fat increases the risk.

Lidocaine (Xylocaine®) is an example of a local anesthetic which is chemically classified as an

- A. amide.
- B. ester.
- C. aldehyde.
- D. ethamine.
- E. aminide.

Procaine (Novocaine®) is an example of a local anesthetic which is chemically classified as an

- A. amide.
- B. ester.
- C. aldehyde.
- D. ethamine.
- E. aminide.

A protective mechanism of the dental pulp to external irritation or caries is the formation of

- A. pulp stones.
- B. tertiary dentin.
- C. secondary cementum.
- D. primary dentin.

Which of the following drugs is used in the treatment of mild allergic reactions?

- A. Isoproterenol.
- B. Meperidine hydrochloride.
- C. Diphenhydramine hydrochloride.
- D. Propoxyphene.

When a radiographic examination is warranted for a 10 year old child, the most effective way to decrease radiation exposure is to

- A. use a thyroid collar and lead apron.
- B. apply a radiation protection badge.
- C. use high speed film.
- D. decrease the kilovoltage to 50kVp.
- E. take a panoramic film only.

If an alginate impression must be stored for a few minutes before the cast is poured, it should be placed in

- A. water.
- B. 100% relative humidity.
- C. a 1% aqueous calcium sulfate solution.

An end result of ionizing radiation used to treat oral malignancies is

- A. deformity of the jaws.
- B. reduced vascularity of the jaws.
- C. increased vascularity of the jaws.
- D. increased brittleness of the jaws.

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Which of the following is most often associated with a nonvital tooth?

- A. Chronic periradicular periodontitis.
- B. Internal resorption.
- C. Periapical cemento-osseous dysplasia.
- D. Hyperplastic pulpitis.

Myxedema is associated with

- A. insufficient parathyroid hormone.
- B. excessive parathyroid hormone.
- C. insufficient thyroid hormone.
- D. excessive thyroid hormone.

Condensing osteitis in the periapical region is indicative of a/an

- A. acute inflammation of the pulp.
- B. pulpal abscess.
- C. chronic inflammation of the pulp.
- D. early apical abscess formation.

A 15 year old presents with hypoplastic enamel on tooth 1.5. All other teeth are normal. This was most probably caused by a/an

- A. vitamin D deficiency.
- B. generalized calcium deficiency.
- C. high fever encountered by the patient when he had measles at age 3.
- D. infection of tooth 5.5 during the development of tooth 1.5.
- E. hereditary factor.

Which of the following features would be most indicative of a cracked tooth?

- A. Periapical radiolucency.
- B. Hypersensitivity to thermal stimuli.
- C. Pain upon biting pressure.
- D. Absent vitalometric response.

A 4 year old child has a normal complement of deciduous teeth, but in appearance they are grayish and exhibit extensive occlusal and incisal wear. Radiographic examination indicates some extensive deposits of secondary dentin in these teeth. This condition is typical of

- A. cleidocranial dysplasia.
- B. amelogenesis imperfecta.
- C. neonatal hypoplasia.
- D. dentinogenesis imperfecta.

Root resorption of permanent teeth may be associated with

- 1. excessive orthodontic forces.
- 2. chronic periradicular periodontitis.
- 3. traumatic injury.
- 4. periapical cemento-osseous dysplasia.

- A. (1) (2) (3)
- B. (1) and (3)
- C. (2) and (4)
- D. (4) only
- E. All of the above.

Which of the following results from a necrotic pulp?

- A. Dentigerous cyst.
- B. Lateral periodontal cyst.
- C. Chronic periradicular periodontitis.
- D. Pulp polyp.

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Which of the following is/are associated with an unerupted tooth?

1. Odontogenic adenomatoid tumor.
  2. Periapical cemento-osseous dysplasia.
  3. Calcifying epithelial odontogenic tumor.
  4. Cementoblastoma.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

An ankylosed tooth is usually

- A. nonvital.  
B. associated with a root fracture.  
C. infraerupted.  
D. found in the permanent dentition.

For which of the following pathological conditions would a lower central incisor tooth be expected to respond to heat, cold and electric pulp test?

- A. Apical cyst.  
B. Acute apical abscess.  
C. Periapical cemento-osseous dysplasia.  
D. Chronic apical periodontitis.

The microscopic appearance of the central giant cell granuloma of the jaws is similar to that of lesions which occur in

- A. hyperparathyroidism.  
B. Paget's disease.  
C. cleidocranial dysplasia.  
D. hyperpituitarism.

An ameloblastoma can develop from the epithelial lining of which of the following cysts?

- A. Periradicular.  
B. Dentigerous.  
C. Residual.  
D. Lateral periodontal.

Radiographically, the opening of the incisive canal may be misdiagnosed as a

1. branchial cyst.
  2. nasopalatine cyst.
  3. nasolabial cyst.
  4. periradicular cyst.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

On a bite-wing radiograph of posterior teeth, which of the following is most likely to be misdiagnosed as proximal caries?

- A. Cemento-enamel junction.  
B. Marginal ridge.  
C. Carabelli cusp.  
D. Calculus.  
E. Cemental tear.

A well circumscribed 3mm radiolucent lesion is present in the apical region of the mandibular second premolar. The tooth responds normally to vitality tests. The radiolucency is most likely

- A. a periradicular periodontitis.  
B. a dentigerous cyst.  
C. a rarefying osteitis.  
D. the mental foramen.

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A patient complains of acute pain 24 hours after the insertion of a restoration in a tooth with no preexisting periapical pathology. The tooth is vital and tender to percussion. The radiograph will show

- A. an apical radiolucency.
- B. acute osteitis.
- C. root resorption.
- D. condensing osteitis.
- E. normal lamina dura.

A cold stimulus applied to a tooth will produce a hypersensitive response if the tooth

- A. is nonvital.
- B. has a periodontal pocket.
- C. has a hyperemic pulp.
- D. has chronic proliferative pulpitis.

The most appropriate radiographic examination for a 4 year old without visible or clinically detectable caries or anomalies, and with open proximal contacts is

- A. maxillary and mandibular anterior occlusals.
- B. a pair of posterior bite-wings.
- C. maxillary and mandibular posterior periapicals.
- D. no radiographic examination.

One week after an amalgam restoration is placed in the mandibular first premolar, the patient returns complaining of a sharp pain of short duration when eating or drinking something cold. Teeth respond normally to electric pulp testing and heat and the radiographs are normal. The most likely diagnosis is

- A. hypercementosis.
- B. reversible pulpitis.
- C. pulpal microabscess.
- D. acute periradicular periodontitis.

A 12 year old child presents with characteristic tetracycline discoloration of the maxillary and mandibular incisors and permanent first molars. The probable age at which this child received tetracycline therapy was

- A. 6 years.
- B. 4 years.
- C. 1 year.
- D. before birth.

A 6 year old patient has a larger than average diastema between the maxillary central incisors. The radiographic examination shows a mesiodens. In order to manage the diastema, you should extract the mesiodens

- A. after its complete eruption.
- B. once the patient has reached the age of 12.
- C. only if it develops into a cystic lesion.
- D. as soon as possible.

A large carious exposure occurs on a permanent first molar of a 7 year old. There is no periapical involvement and the tooth is vital. The treatment should be to

- A. cap the exposure with calcium hydroxide and place zinc-oxide and eugenol.
- B. perform a pulpotomy and place calcium hydroxide.
- C. perform a pulpectomy.
- D. extract the tooth and place a space maintainer.

The most appropriate treatment following the extraction of a first primary molar in a 4 year old child is

- A. regular assessment of arch development.
- B. to perform space analysis.
- C. insertion of a space maintainer.
- D. extraction of the contra-lateral molar.
- E. extraction of the opposing molar.

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A Le Fort I or Guerin fracture is a

- A. fracture of the zygomatic arch.
- B. horizontal fracture of the maxilla.
- C. fracture of the malar complex involving the floor of the orbit.
- D. pyramidal fracture of the maxilla.
- E. craniofacial dysjunction.

Which of the following will impede healing following the surgical closure of an oroantral fistula?

- 1. Poor flap design.
  - 2. Excessive tissue tension.
  - 3. Blowing the nose.
  - 4. Sinus infection.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

An 8 year old patient with all primary molars still present exhibits a cusp-to-cusp relationship of permanent maxillary and mandibular first molars. The management of this patient should be to

- A. plan serial extractions for more normal adjustment of the occlusion.
- B. refer the patient to an orthodontist for consultation.
- C. place a cervical headgear to reposition maxillary molars.
- D. disk the distal surfaces of primary mandibular second molars to allow normal adjustment of permanent molars.
- E. observe.

To prevent mesial drift of a permanent first molar, the ideal time to place a distal extension space maintainer is

- A. as soon as the tooth erupts through the gingival tissue.
- B. after the permanent second molar has erupted.
- C. immediately after extraction of the primary second molar.
- D. as soon as the extraction site of the primary second molar has completely healed.

Immediately following a posterior superior alveolar block injection, the patient's face becomes quickly and visibly swollen. The immediate treatment should be to

- A. use pressure followed by cold packs over the swelling.
- B. use hot packs over the swelling.
- C. refer the patient to a hospital.
- D. administer 100mg hydrocortisone intravenously.
- E. administer diphenhydramine hydrochloride (Benadryl®) 50mg intravenously.

Epinephrine should NOT be used as a vasoconstrictor for patients with uncontrolled

- A. hyperthyroidism.
- B. hyperparathyroidism.
- C. myxedema.
- D. asthma.

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A known insulin-dependent diabetic patient feels unwell following the administration of a local anesthetic and becomes pale and sweaty. This condition does not respond to placing the patient in a supine position. The most likely cause is

- A. syncope.
- B. adrenal insufficiency.
- C. hyperglycemia.
- D. hypoglycemia.
- E. carotid sinus reflex.

Generally, glass ionomer cements contain

- A. zinc oxide and distilled water.
- B. zinc oxide and polyacrylic acid.
- C. fluoroaluminosilicate powder and orthophosphoric acid.
- D. fluoroaluminosilicate powder and polyacrylic acid.

A fracture in an all-ceramic crown may be caused by

- 1. inadequate ceramic thickness.
  - 2. sharp line angles in the tooth preparation.
  - 3. excessive occlusal load.
  - 4. use of an inappropriate luting material.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Which of the following conditions would NOT require antibiotic premedication before endodontic therapy?

- A. Valvular heart disease.
- B. Cardiac prosthesis.
- C. Persistent odontogenic fistula.
- D. Immunosuppressive therapy.
- E. Organ transplant.

Under normal conditions, the most definitive test to confirm the loss of pulp vitality is

- A. applying warm gutta percha to the crown.
- B. cutting into the dentin without anesthetic.
- C. applying ethyl chloride to the crown.
- D. performing a radiographic examination of the tooth.
- E. performing an electric pulp test.

A radiopaque area within the alveolar process containing several rudimentary teeth suggests a/an

- A. periapical cemento-osseous dysplasia.
- B. ameloblastoma.
- C. compound odontoma.
- D. complex odontoma.
- E. Pindborg tumor.

The usual adult dosage of codeine administered orally is

- A. 500-1000mg.
- B. 250-500mg.
- C. 30-60mg.
- D. 2-5mg.

Recurrent caries

- A. is caused by microleakage at the restoration-tooth interface.
- B. is initiated primarily on the tooth surface beyond the restoration.
- C. is caused by voids within the restoration entirety.
- D. occurs in the pits of tooth structure.

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In which of the following will the effects of polymerization shrinkage be greatest?

- A. Class I occlusal restoration.
- B. Preventive resin restoration.
- C. Direct veneer restoration.
- D. Class IV restoration.

An anterior endodontically treated tooth has been restored with a carbon fibre, a direct restorative core and a porcelain fused to metal crown. What is the most important factor influencing the prognosis of this tooth?

- A. Type of core material.
- B. Type of luting cement.
- C. Amount of remaining coronal tooth structure.
- D. Alloy composition of the post.

What is the best predictor of success for a composite resin restoration?

- A. Depth of the restoration.
- B. Size of the restoration.
- C. Presence of enamel on the entire periphery.
- D. Presence of flat dentinal walls.

The primary etiological factor for the development of root caries is

- A. gingival recession.
- B. acquired xerostomia.
- C. poor oral hygiene.
- D. cigarette smoking.

Adjustments made to Class II amalgam preparations to ensure the tooth structure does not fracture under masticatory forces is a part of the

- A. convenience form.
- B. retention form.
- C. outline form.
- D. resistance form.

Excessive flare of the distobuccal cavosurface margin of a Class II amalgam cavity preparation will result in

- A. unsupported enamel at the margin.
- B. weak amalgam at the margin.
- C. poor retention.
- D. poor esthetics.

Gigantism is caused by

- A. a hyperactive thyroid.
- B. atrophy of the posterior pituitary.
- C. hyperplasia of the anterior pituitary.
- D. hyperplasia of the parathyroids.

When compared to permanent teeth, primary teeth have

- A. a greater thickness of enamel.
- B. a greater thickness of dentin.
- C. more prominent cervical constriction.
- D. pulps which are smaller in relation to crown size.

Unmyelinated nerves found in the pulp that respond to thermal, mechanical, chemical and inflammatory stimuli are called

- A. C fibres.
- B. A delta fibres.
- C. sympathetic fibres.
- D. dentinal tubules.

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Which of the following substances causes inflammation and pain when released by pulpal fibres?

- A. Prostaglandin E<sub>2</sub>.
- B. Calcitonin gene related peptide.
- C. Neuraminase.
- D. Acetylcholine.

Regarding the Dietary Reference Intake (DRI) for calcium,

- A. adult men and women require the same amount.
- B. more calcium is required during pregnancy and lactation.
- C. women over 70 years require more than men over 70 years.
- D. under the age of 18, boys require more calcium than girls.

Gingival response to plaque microorganisms in elderly patients is

- A. exaggerated due to an altered host immune response.
- B. exaggerated due to a change in the type of infecting microorganisms.
- C. the same in all ages.
- D. decreased due to an altered host immune response.

Duraflor®

- A. is only effective on dry, plaque-free teeth.
- B. can remineralize early root carious lesions.
- C. causes unsightly stain on exposed roots.
- D. should only be used on individuals in unfluoridated areas.

A new patient had an acute pulpitis. Treatment included a pulpotomy and a prescription for 30 tabs of Percocet®. Known to local police as a drug user, the patient subsequently bragged to a police officer that it was very easy to get narcotics from his new dentist. Several weeks later, a police officer attends the office explaining that he is conducting an investigation into health professionals complicit in narcotic trafficking. Which of the following statements is correct?

- A. There is a legal duty to assist in any criminal investigation.
- B. Patient files must be released to police upon request.
- C. A subpoena is required for the dentist to present relevant documents.

Dentists in a prosthetic study club have been asked to recruit subjects for a clinical trial of a new dental implant system. Dentists will receive a \$500 finder's fee for each subject recruited. Subjects will receive the treatment for free. Which of the following statements is correct?

- A. Subjects in this trial are protected by the clinical trial regulations of the *Food and Drugs Act*.
- B. Ethics review of clinical trials in Canada is legislated to follow the Tri-Council Policy Statement.
- C. The finder's fee is justified because of the time required to identify suitable subjects.
- D. Free treatment for subjects is justified due to the time and inconvenience.

Which of the following agents is most effective in cold testing?

- A. Ice water.
- B. Air jet.
- C. CO<sub>2</sub> (dry ice).
- D. Ethyl chloride.

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A Vitamin B<sub>2</sub> (riboflavin) deficiency usually arises in patients

1. who are elderly.
  2. with acute infection.
  3. consuming a high protein or fat diet.
  4. taking systemic antibiotics.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

A "butterfly-rash" of the face can sometimes be found in

- A. erythema multiforme.  
B. lupus erythematosus.  
C. pemphigus vulgaris.  
D. acne rosacea.

Which of the following structures may be associated with the role of the central nervous system in sleep (nocturnal) bruxism?

- A. Basal ganglia (nigrostriatal).  
B. A delta and C nerves.  
C. Sphenopalatine ganglion.  
D. Petrous nerves.

Which of the following dental procedures could be performed with minimal risk for a 35 year old patient with a severe bleeding disorder?

- A. Mandibular block anesthesia.  
B. Supragingival calculus removal.  
C. Incisional biopsy.  
D. Subgingival restoration.

Which of the following cells are characteristic of chronic inflammation of the dental pulp?

1. Plasma cells.
  2. Macrophages.
  3. Lymphocytes.
  4. Neutrophils.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

An open proximal contact on an amalgam restoration can be prevented by

- A. appropriate wedge selection.  
B. tightening the matrix band.  
C. light condensing forces.  
D. simultaneous placement of adjacent proximal restorations.

Which of the following presents with high serum calcium levels, thinning of cortical bone and giant cell osteoclasts in the jaw and drifting teeth?

- A. Hyperthyroidism.  
B. Hyperparathyroidism.  
C. Hypothyroidism.  
D. Hypoparathyroidism.

Cold working a metal increases its

- A. ductility.  
B. hardness.  
C. resistance to corrosion.  
D. strength.

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What is the most significant radiographic finding in hyperparathyroidism?

- A. Demineralization of teeth.
- B. Multiple odontogenic keratocysts.
- C. Hypercementosis.
- D. Rampant caries.
- E. Generalized loss of lamina dura.

In providing maxillary anterior esthetic dentistry, optimal results are obtained by considering all the following EXCEPT

- A. midline orientation of the incisors.
- B. age and gender of the patient.
- C. Curve of Wilson.
- D. lower lip line.

Which statement is true regarding amalgam?

- A. A thin layer can be left to seal the cavosurface margins.
- B. It bonds on its own to tooth structure.
- C. It wears at a rate similar to that of tooth structure.
- D. It is time-consuming to place compared to composite resin.

*Streptococcus mutans* selectively colonizes

- A. enamel.
- B. cementum.
- C. tongue.
- D. buccal mucosa.

After a tooth surface has been completely cleaned, the new glycoprotein coating which forms on the surface is called

- A. pellicle.
- B. plaque.
- C. materia alba.
- D. biofilm.

Coxsackie A virus is the etiologic agent in

- A. papilloma.
- B. herpangina.
- C. verruca vulgaris.
- D. condyloma accuminatum.

Which of the following bacterial components is a potent inducer of proinflammatory cytokines and can cause fever and shock?

- A. Lipopolysaccharide.
- B. Peptidoglycan.
- C. Teichoic acid.
- D. Porins.

Which of the following indicates a failure of a dental implant?

- A. Gingival inflammation.
- B. Horizontal bone loss of one third of the implant length.
- C. Mobility.
- D. Increased probing depths.

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Which of the following does NOT need to be considered when assessing whether exposure of bodily fluids to a dental health care personnel is significant?

- A. Patient's gender.
- B. Type of bodily fluid.
- C. Infectious disease status of the patient.
- D. Amount of bodily fluid involved in the injury.

A patient is hit in the right eye with a baseball. Which of the following would indicate a right orbital floor fracture?

- A. Right periorbital edema.
- B. Right periorbital ecchymosis.
- C. Limited upward movement of the right eye.
- D. Premature occlusal contact on the maxillary right.

For an avulsed, fully developed permanent tooth that has been reimplanted, a favourable prognosis is most affected by the

- A. length of time the tooth has been out of the mouth.
- B. use of an appropriate antibiotic.
- C. effectiveness of the irrigation of the socket.
- D. rigidity of the splint.
- E. thoroughness of the curettage of the root surface.

Zinc phosphate cement, when used as a luting agent, has which of the following properties?

- A. Mechanical retention.
- B. Insolubility.
- C. Anticariogenicity.
- D. Chemical adhesion.

Which of the following is NOT an advantage of using an etchant and bonding system before insertion of a composite resin restoration?

- A. Improved retention.
- B. Decreased marginal leakage.
- C. Greater strength of the restoration.
- D. Reduced polymerization shrinking effect.

For sterilization to occur in an autoclave, all of the following must be monitored EXCEPT

- A. chemical levels.
- B. time.
- C. pressure.
- D. temperature.

Gloves should

- A. be washed with mild soap and warm water after a dental procedure before treating the next patient.
- B. be removed after use and replaced with new gloves before treating another patient.
- C. not be used if the patient reports a latex allergy.
- D. not be used in dental procedures requiring fine tactile discrimination.
- E. be placed on the hands before tying on a mask.

Ludwig's angina initially involves a massive infection of the

- A. parapharyngeal and retropharyngeal spaces.
- B. submandibular and sublingual regions.
- C. buccal superficial fascial and canine spaces.
- D. maxillary and ethmoidal sinuses.

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A subluxated tooth will have

- A. mobility and displacement.
- B. no mobility and no displacement.
- C. mobility and no displacement.

During healing following implant placement, the cells that generate new bone tissue are

- A. osteoblasts.
- B. osteocytes.
- C. osteoclasts.
- D. osteophytes.

When producing a metal-ceramic crown restoration

- A. the body-porcelain layer should be rich in opacifying oxides.
- B. oversizing the body-porcelain layer prior to sintering should be avoided.
- C. the porcelain thermal expansion coefficient should be slightly lower than the metal.
- D. fusing should be followed by quenching.

Splinting of a permanent maxillary incisor following trauma is required in the management of a

- A. concussion injury.
- B. luxation injury.
- C. Class II fracture.
- D. Class IV fracture.

In the absence of "Hanks balanced salt solution", what is the most appropriate media to transport an avulsed tooth?

- A. Saliva.
- B. Milk.
- C. Saline.
- D. Tap water.

The most appropriate analgesic for a pregnant patient is

- A. acetaminophen.
- B. acetylsalicylic acid.
- C. hydrocodone and acetaminophen.
- D. ibuprofen.

Patients with resistance to activated protein C (factor V Leiden) are at risk for

- A. fibrinolysis.
- B. bleeding diatheses.
- C. thrombocytopenia.
- D. hypercoagulation.
- E. erythrocytosis.

Following the IV administration of a benzodiazepine, a patient becomes apneic and unresponsive. Which of the following drugs should be administered immediately?

- A. Naloxone.
- B. Propranolol.
- C. Amphetamine.
- D. Flumazenil.
- E. Atropine.

The most common abuser of an elderly person is a/an

- A. friend or acquaintance.
- B. adult child.
- C. spouse.
- D. sibling.

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In domestic violence cases, the highest risk for victim fatality is associated with

- A. an actual or pending separation.
- B. severe depression of the abuser.
- C. prior threats to kill the victim.
- D. a new partner in the victim's life.
- E. a history of abuse of the abuser as a child.

What is the most likely diagnosis for a patient who exhibits elevated blood pressure, swollen ankles, distended neck veins and difficulty breathing when lying down?

- A. Congestive heart failure.
- B. Bronchitis.
- C. End stage renal disease.
- D. Hypertension.

The most common soft tissue calcification or ossification found on a panoramic radiograph is (a)

- A. lymph node.
- B. sialolith.
- C. phlebolith.
- D. stylohyoid ligament.

Which permanent tooth is most likely to have an anomaly?

- A. Mandibular first premolar.
- B. Maxillary lateral incisor.
- C. Mandibular central incisor.
- D. Maxillary first molar.

The most likely condition to mimic periodontal disease is

- A. lateral periodontal cyst.
- B. paradental cyst.
- C. Langerhans cell histiocytosis.
- D. disuse atrophy (ridge resorption).

A panoramic radiograph and bite-wings are required as part of an examination for a new patient. The patient states that radiographs had been taken in the last year by another dental office. The most appropriate management is to

- A. make a panoramic radiograph and bite-wings.
- B. make a panoramic radiograph only.
- C. make bite-wings radiographs only.
- D. request the existing radiographs.

Which ethical principle is violated when a dentist increases fees solely based on the fact that the patient is covered by dental insurance?

- A. Autonomy.
- B. Beneficence.
- C. Justice.
- D. Nonmaleficence.
- E. Veracity.

Which ethical principle is violated when a dentist practices while impaired?

- A. Autonomy.
- B. Beneficence.
- C. Justice.
- D. Nonmaleficence.
- E. Veracity.

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Which ethical principle is involved with a dentist's duty to recognize signs of abuse and neglect and to know appropriate interventions?

- A. Autonomy.
- B. Beneficence.
- C. Justice.
- D. Non maleficence.
- E. Veracity.

Which of the following analgesics is CONTRAINDICATED for the long-term management of myofascial pain syndrome?

- A. Acetylsalicylic acid with codeine.
- B. Ibuprofen.
- C. Oxycodone.
- D. Acetaminophen with codeine.

Which of the following explanations of the caries process is most appropriate for a 10 year old patient who snacks frequently on soft drinks and doughnuts?

- A. When you eat doughnuts and soft drinks, because of all the sugar in them you'll get cavities.
- B. Bacteria in your mouth are the main cause of caries.
- C. Not brushing your teeth means the sugar from your snack attacks your teeth for about twenty minutes.
- D. The 'bugs' in your mouth eat the sugar in the food you eat, and change it into acid which can make holes in your teeth.

A 70 year old female has consumed optimal levels of fluorides all her life. She could be expected to have a reduced incidence of which of the following?

- A. Paget's disease.
- B. Dental caries.
- C. Osteoporosis.
- D. Hyperparathyroidism.

A 28 year old male patient works long days that typically include numerous soft drinks and candy bars, but no opportunity to brush his teeth. He has continued to experience one to two carious lesions per year and now wants orthodontic treatment to straighten his teeth. Which of the following is the most appropriate initial step in addressing behavior modification for this patient?

- A. Providing a new toothbrush and sample tube of dentifrice.
- B. Illustrating, with the aid of drawings the basic caries process.
- C. Explaining how his present habits increase his caries risk.
- D. Explain that treatment cannot be initiated until he can keep his teeth clean.

What is the most likely diagnosis of a white diffuse lesion with a wrinkled appearance on the buccal mucosa which disappears upon stretching?

- A. Leukoedema.
- B. Lichen planus.
- C. Candidiasis.
- D. Linea alba.
- E. White sponge nevus.

A 20 year old student presents with clinical symptoms of necrotizing ulcerative gingivitis (NUG). Food intake for the last 24 hours indicates a soft diet lacking in fruits and vegetables. The patient's diet is important to investigate further because

- A. a deficiency of certain nutrients causes NUG.
- B. NUG may be limiting the food choices the patient is making.
- C. NUG can be cured through modification of diet.
- D. patients with NUG lose interest in eating.

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Which of the following dental health recommendations is consistent with the general nutrition guidelines?

- A. Diet soft drinks and potato chips are an acceptable snack.
- B. A piece of fruit and plain yogurt is an acceptable snack.
- C. Eat a bigger lunch and not snack.
- D. Brush your teeth well after snacks.

Which disease is associated with a higher proportion of *Fusobacterium*, *Porphyromonas*, *Prevotella*, and spirochetes?

- A. Necrotizing ulcerative periodontitis.
- B. Chronic periodontitis.
- C. Aggressive periodontitis.
- D. Root caries.
- E. Early childhood caries.

Muscle spindles associated with stretch reflexes

- A. are composed of extrafusal muscle fibres.
- B. are innervated by alpha motor neurons.
- C. mediate autogenic inhibition of muscle contraction.
- D. possess fibres that are capable of contraction.
- E. contribute to the main force production properties of muscle.

Rigor mortis is

- A. due to intracellular  $\text{Ca}^{2+}$  ion depletion.
- B. due to cellular ATP depletion.
- C. mechanistically identical to a tetanic contraction.
- D. characterized by spastic paralysis.
- E. an isotonic contraction.

Heart rate is increased by

- A. hyperkalemia.
- B. reduced  $\alpha_1$ -adrenergic receptor activity.
- C. atropine.
- D. acetylcholine.
- E. elevated vagal tone.

Which of the following is increased after stimulating  $\alpha_1$ -adrenergic receptors?

- A. Contractility of the heart.
- B. SA node activity.
- C. Blood vessel constriction.
- D. Bronchial dilation.

Daily fluid loss from a healthy individual at rest in a temperate climate is approximately

- A. 250ml.
- B. 500ml.
- C. 1.0L.
- D. 2.5L.
- E. 5.0L.

Angiotensin II converting enzyme is primarily produced in

- A. osteoblasts.
- B. epithelial cells of the small intestine.
- C. hepatocytes.
- D. Kupffer cells.
- E. vascular endothelial cells of the lung.

Defects in the outflow tract of the heart in individuals with craniofacial malformations are caused by the disruption of

- A. mesoderm development.
- B. neurulation.
- C. folding of the embryo.
- D. neural crest development.

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In the embryo which of the following could be missing if pharyngeal pouch development is disrupted?

- A. Thyroid.
- B. Maxillary sinus.
- C. Thymus.
- D. Inner ear.

On the basis of “Socransky’s Modifications of Koch’s Postulates”, the potential pathogens in periodontal disease must possess all of the following EXCEPT

- A. be associated with disease, as evidenced by increases in the number of organisms at diseased sites.
- B. be eliminated or decreased in sites that demonstrate clinical resolution of disease with treatment.
- C. demonstrate a host response, in the form of alteration in the host cellular, not humoral, immune response.
- D. be capable of causing disease in experimental animal models.
- E. demonstrate virulence factors responsible for enabling the organisms to cause periodontal tissue destruction.

What is the most appropriate action for a dentist to take for a female patient experiencing spousal abuse?

- A. Speak to the alleged abuser to assess the level of threat to the patient.
- B. Offer resource materials and referrals to community agencies to the patient.
- C. Focus on dental matters and consider the abuse issues in the future.
- D. Counsel the patient to leave the abuser.

To initiate caries, bacterial plaque pH must reach

- A. 5.4.
- B. 5.9.
- C. 6.4.
- D. 6.9.

The physiologic rest position of the mandible is

- A. a position unrelated to tonicity of mandibular muscles.
- B. affected by the time of measurement.
- C. the primary means of determining occlusal vertical dimension.
- D. used when making a centric interocclusal record.

Cementum

- A. contains minimal amounts of collagen.
- B. has areas devoid of matrix-forming cells.
- C. vascularized at its periphery.

Which of the following fibre groups are attached to bone?

- A. Apical.
- B. Interradicular.
- C. Transseptal.
- D. Circular.

Normal aging changes in the tooth tissues include

- A. continuous deposition of cementum.
- B. augmented dentin sensitivity.
- C. increased porosity of enamel.

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In a teenage patient with normal gingiva, interdental plaque removal is best accomplished with

- A. a regular toothbrush.
- B. a hard nylon bristle brush.
- C. an interproximal brush.
- D. dental floss.
- E. an interdental wood stick.

Overcontouring in the gingival third of a provisional restoration contributes to the

- A. retention of the provisional restoration.
- B. accumulation of plaque and gingival inflammation.
- C. displacement of the gingiva for future impression making.
- D. marginal integrity of the provisional restoration.

A fracture through the angle of the mandible may result in an upward displacement of the proximal fragment. Which of the following groups of muscles produce this movement?

- A. Digastric and geniohyoid.
- B. Masseter, digastric and lateral pterygoid.
- C. Masseter, temporal and lateral pterygoid.
- D. Masseter, temporal and medial pterygoid.

When taking radiographs on a 10 year old child, which of the following should be used to decrease radiation exposure?

- A. Prescribe radiographs every 3 years.
- B. A decrease of the Kilovoltage to 50kVp.
- C. Use of high speed film.
- D. Application of a radiation protection badge.

An abused woman is most at risk of being murdered when she

- A. Argues with the abuser in front of their children.
- B. Separates from her abusive spouse.
- C. Confides in friends and asks for help.
- D. Reports the abuse to law enforcement.

Side effects of therapeutic doses of codeine can include

- 1. constipation.
  - 2. drowsiness.
  - 3. nausea.
  - 4. respiratory depression.
- A. (1) (2) (3)
  - B. (1) and (3)
  - C. (2) and (4)
  - D. (4) only
  - E. All of the above.

Polymerization shrinkage in a composite resin is reduced by

- A. placing a glass ionomer liner on all exposed dentin before placing composite resin.
- B. doubling the curing time of the resin in preparations that are deep.
- C. using a flowable composite on the gingival floor of Class II preparations.
- D. incremental placement of no more than 2mm thicknesses of composite resin.

What is the most frequent malignant tumour of the tongue?

- A. Adenoma.
- B. Adenocarcinoma.
- C. Rhabdomyosarcoma.
- D. Squamous cell carcinoma.
- E. Granular cell myoblastoma.

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Blue sclera is characteristic of

- A. osteopetrosis.
- B. osteogenesis imperfecta.
- C. osteitis deformans.
- D. fibrous dysplasia.

In which salivary gland is a pleomorphic adenoma most frequently found?

- A. Parotid.
- B. Submandibular.
- C. Sublingual.

Condensing osteitis differs from idiopathic osteosclerosis because it is

- A. expansile.
- B. painful.
- C. associated with fever.
- D. associated with pulpal inflammation.

The most common cause of bilateral swelling of the parotid glands in children is

- A. Mikulicz's disease.
- B. mumps or acute infectious parotitis.
- C. mixed salivary tumours.
- D. sialolithiasis.

Following trauma, bluish-grey discolouration of the crown of an anterior tooth is due to

- A. external resorption.
- B. pulpal hemorrhage.
- C. discoloured composite restoration.
- D. chromogenic bacteria.

Which of the following is used to verify the effectiveness of instrument sterilization?

- A. Gram-negative bacteria.
- B. Anerobic bacteria.
- C. Spores.
- D. Oral microorganisms.

The minimum time to re-evaluate tissue response after initial therapy for a patient with generalized moderate chronic periodontitis is

- A. 1-10 days.
- B. 11-20 days.
- C. 21-30 days.
- D. 31-40 days.

Gingival enlargement associated with use of phenytoin is primarily characterized by an increase of

- A. plasma cells.
- B. edema.
- C. collagen.
- D. keratinocytes.

Gingival enlargement associated with use of cyclosporine is primarily characterized by an increase of

- A. plasma cells.
- B. edema.
- C. collagen.
- D. keratinocytes.

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The most appropriate suture combination for a through laceration of the lower lip would be

- A. skin: 5.0 nylon, muscle: 3.0 vicryl, mucosa: 3.0 gut.
- B. skin: 3.0 silk, muscle: 3.0 silk, mucosa: 3.0 silk.
- C. skin: 3.0 gut, muscle: 3.0 vicryl, mucosa: 3.0 silk.
- D. skin: 5.0 nylon, muscle: 3.0 silk, mucosa: 3.0 gut.
- E. skin: 3.0 gut, muscle: 3.0 vicryl, mucosa: 3.0 gut.

Over the lifetime of a patient, the relative position of the midface in comparison to the mandible is

- A. anterior.
- B. constant.
- C. posterior.

Chlorhexidine is a

- A. quaternary ammonium compound.
- B. bisbiguanide compound.
- C. phenol.
- D. plant extract.

When placing an implant in the posterior mandible, the minimum thickness of bone between the implant and the inferior alveolar nerve should be

- A. 2mm.
- B. 4mm.
- C. 6mm.
- D. 8mm.

Histologically, periodontitis is distinguished from gingivitis by

- A. increased collagen destruction.
- B. increased gingival inflammation.
- C. apical migration of dentogingival epithelium.

When will infiltrating new blood vessels be histologically detectable following a free gingival graft?

- A. 2 to 3 hours.
- B. 2 to 3 days.
- C. 2 to 3 weeks.
- D. 2 to 3 months.

Following periodontal surgery, the curetted root surface is repopulated by cells derived from all of the following tissues EXCEPT

- A. periodontal ligament.
- B. cementum.
- C. alveolar bone.
- D. epithelium.
- E. gingival connective tissue.

Initial therapy for periodontal pockets that are deeper than 5mm must include supragingival scaling and

- A. polishing.
- B. irrigation.
- C. root planning.
- D. antibiotics.

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Which of the following resorbable sutures has the smallest thread size?

- A. 3.0 polyglycolic acid.
- B. 4.0 silk.
- C. 5.0 chromic gut.
- D. 6.0 nylon.

A 22 year old patient, who is otherwise healthy, has severe pain and discomfort in the mouth. Clinical findings are gingival ulceration in the anterior region of both arches, gingiva covered by a yellow-grey slough, ulcerated papillae, gingival bleeding upon slight provocation, a fetid odor but no radiographic evidence of bone loss. What is the most probable diagnosis?

- A. Localized aggressive periodontitis.
- B. Localized aggressive gingivitis.
- C. Necrotizing ulcerative periodontitis.
- D. Necrotizing ulcerative gingivitis.

The most significant modifiable risk factor for periodontitis is

- A. cigarette smoking.
- B. bacterial plaque.
- C. psychological stress.
- D. dental calculus.

Repair of periodontal tissues is the replacement of lost tissue with one that is similar in

- A. function.
- B. structure.
- C. structure and function.

Regeneration of periodontal tissue is the replacement of lost tissue with one that is similar in

- A. function.
- B. structure.
- C. structure and function.

The facial growth spurt

- A. occurs in males before females.
- B. starts on average at 7 years for females.
- C. starts on average at 13 years for males.
- D. parallels body growth.

When used as a direct pulp capping material, which of the following produces the best pulp healing?

- A. Zinc-oxide eugenol.
- B. Glass-ionomer.
- C. Calcium hydroxide.
- D. Resin-modified glass ionomer.
- E. Adhesive resin.

Latex gloves should

- A. be washed with plain soap before initial use.
- B. be washed with plain soap when used between patients.
- C. be washed with a disinfectant solution only.
- D. not be washed.

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In a general dental practice setting, patients who are actively infectious with *Mycobacterium tuberculosis* CANNOT be safely treated

- A. unless there is adherence to standard precautions.
- B. even if standard precautions are used.
- C. unless a preoperative antimicrobial rinse is used in addition to standard precautions.
- D. unless preoperative prophylactic antibiotic coverage and standard precautions are used.

Which of the following has clinically active metabolites?

- A. Alprazolam.
- B. Diazepam.
- C. Lorazepam.
- D. Midazolam.
- E. Triazolam.

Renal excretion of drug metabolites is influenced by all of the following EXCEPT

- A. plasma protein binding.
- B. tissue redistribution.
- C. volume of distribution.
- D. glomerular filtration.

Metabolism of ibuprofen is NOT affected by

- A. decreased cardiac output.
- B. plasma protein binding.
- C. gastric emptying rate.
- D. hepatic enzyme activity.

Which of the following has been implicated in the development of oral pigmentation?

- A. Atorvastatin.
- B. Chloroquine.
- C. Fluoxetine.
- D. Omeprazole.
- E. Valsartan.

A 32 year old patient presents with several shallow, round ulcers, 3-5mm in diameter, on the left and right buccal mucosa. The most likely diagnosis is

- A. recurrent herpes.
- B. traumatic ulcers.
- C. pemphigus vulgaris.
- D. aphthous ulcers.

Which of the following is NOT a recognized ethics-based principle?

- A. Citizenship.
- B. Justice.
- C. Non maleficence.
- D. Autonomy.
- E. Veracity.

Which of the following is NOT a recognized ethics-based principle?

- A. Beneficence.
- B. Justice.
- C. Non maleficence.
- D. Autonomy.
- E. Scholarship.

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To advance a patient's welfare, dentists should refer to a specialist considering all of the following EXCEPT

- A. experience.
- B. fees.
- C. knowledge.
- D. skills.

The legally set age for authorization of health care treatment

- A. is 16 years of age.
- B. indicates 'mature minor' status.
- C. presumes capacity.
- D. applies universally.

Which type of legal action can result in the payment of damage?

- A. Causation.
- B. Discipline.
- C. Intention.
- D. Tort.

The following violations provide grounds for a criminal action in battery EXCEPT

- A. intentional touching.
- B. defamation causing harm.
- C. treatment without consent.
- D. harmful contact.

In Canada, the practice of dentistry is regulated through the

- A. Canadian Dental Association.
- B. Provincial Regulatory Authorities.
- C. National Dental Examining Board of Canada.
- D. Commission on Dental Accreditation.

Which of the following laws is the LEAST relevant to the dental patient record as a legal document?

- A. Provincial.
- B. Criminal.
- C. Consumer.
- D. Common.

What is the most likely diagnosis of a white lesion on the retromolar pad opposing a non-functional molar?

- A. Alveolar ridge keratosis.
- B. Candidiasis.
- C. Lichen planus.
- D. Squamous cell carcinoma.

The disease-control phase of treatment includes

- A. pit and fissure sealants.
- B. fixed prosthodontics.
- C. occlusal therapy.
- D. orthodontic treatment.
- E. scaling and root planning.

Moistened dentin is preferred over dry dentin prior to the application of dentin bonding agents because

- A. curing time is reduced.
- B. the collagen matrix is maintained.
- C. the smear layer is removed by the application of water.
- D. enamel bonding is improved.

The etiology of noncarious cervical lesions is

- A. multifactorial in nature.
- B. determined by the shape of the lesion.
- C. determined by an occlusal analysis.
- D. correlated to the dominant hand used for brushing.

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In a xerostomic patient, which salivary glands are most likely responsible for the lack of lubrication?

- A. Accessory.
- B. Labial.
- C. Parotid.
- D. Sublingual and submandibular.

Patients with a history of ankle swelling, shortness of breath and orthopnea are most likely suffering from

- A. asthma.
- B. emphysema.
- C. congestive heart failure.
- D. constrictive pericarditis.

Angular cheilitis in older patients who wear complete dentures is most likely associated with

- A. antibiotic therapy.
- B. decreased vertical dimension.
- C. decreased salivary flow.
- D. vitamin B deficiency.

Cleidocranial dysostosis can be associated with (a)

- A. premature loss of teeth.
- B. micrognathia.
- C. high incidence of clefts.
- D. associated high caries index.
- E. multiple supernumerary and unerupted teeth.

At the preparation stage for a 4.6 DO restoration, a brown, non-cavitated lesion is observed on the 4.7 mesial proximal surface. There is no evidence on a bitewing radiograph of a radiolucency extending into the dentin. What is the most appropriate management of the mesial surface of tooth 4.7?

- A. Perform no operative treatment and apply fluoride.
- B. Prepare the lesion with a ball diamond and restore with a flowable composite resin.
- C. Prepare and restore with a mesio-occlusal slot resin modified glass ionomer.
- D. Prepare and restore with a mesio-occlusal slot composite resin.

Exophthalmia may be a sign of

- A. hypoadrenalism.
- B. hyperadrenalism.
- C. hypothyroidism.
- D. hyperthyroidism.
- E. hypoparathyroidism.

Which of the following is the principal muscle of the floor of the mouth?

- A. Stylohyoid.
- B. Digastric.
- C. Geniohyoid.
- D. Mylohyoid.
- E. Platysma.

What is the most common site for intraoral squamous cell carcinoma?

- A. Gingiva.
- B. Floor of mouth.
- C. Buccal mucosa.
- D. Dorsum of tongue.

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A 60 year old patient presents with lingual erosion of the maxillary incisors. The most likely cause is

- A. alcoholism.
- B. ulcerative colitis.
- C. diabetes mellitus.
- D. mitral valve prolapse.
- E. rheumatoid arthritis.

Which of the following is the most common tumor of the parotid gland?

- A. Pleomorphic adenoma.
- B. Oncocytoma.
- C. Warthin's tumor.
- D. Canalicular adenoma.

Spirochete activity is seen by

- A. staining with Gram's method.
- B. staining with methylene blue.
- C. observation with dark-field microscopy.
- D. observation with conventional microscopy.

An ideal occlusion has

- A. an absence of contact on cingulums during protrusion.
- B. canine guidance or group function on the working side.
- C. contact between posterior teeth during protrusion.
- D. posterior tooth contact on the non-working side.

The incidence of a second mesiobuccal canal in the maxillary first molar is

- A. 40%
- B. 60%.
- C. 80%.
- D. 100%.

In the context of informed consent, choice means the ability

- A. to accept recommended beneficial treatment voluntarily.
- B. to refuse recommended beneficial treatment voluntarily.
- C. to refuse recommended beneficial treatment with an understanding of foreseeable consequences.

During an incisal clench, the activity of the elevator muscles is

- A. increased.
- B. decreased.
- C. unaffected.

A dentist must be prudent in deciding how far to follow a patient's informed choice for suboptimal treatment because

- A. the law protects a patient's right to make poor decisions.
- B. a patient's informed choice must always be honoured.
- C. the principle of do-no-harm overrides the patient's personal choice.

Ethics is most concerned with

- A. patient rights.
- B. standard of right and wrong.
- C. legal liability.
- D. provincial codes of conduct.

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The Controlled Drugs and Substances Act controls the distribution and use of which of the following?

- A. Diazepam.
- B. Carbamazepine.
- C. Gabapentin.
- D. Celecoxib.

The Controlled Drugs and Substances Act controls the distribution and use of which of the following?

- A. Carbamazepine.
- B. Celecoxib.
- C. Codeine.
- D. Gabapentin.

When using forceps to extract a maxillary first molar, the forceps movement should be principally in the buccal direction because the

- A. buccal bone is thinner than the palatal bone.
- B. buccal roots are shorter than palatal root.
- C. risk for sinus perforation is minimized.
- D. furcation is more accessible from the buccal.

Granulation tissue which extends coronally from the pulp of a carious tooth is known as a/an

- A. pyogenic granuloma.
- B. pulp polyp.
- C. epulis granulomatosum.
- D. fibroma.

Patients with thrombocytopenia have an increased risk of

- A. bacterial infections.
- B. prolonged bleeding.
- C. exercise intolerance.

Patients with anemia have an increased risk of

- A. bacterial infections.
- B. prolonged bleeding.
- C. exercise intolerance.

Patients who have undergone kidney transplantation are at an increased risk of developing

- A. brown tumours.
- B. plasma cell gingivitis.
- C. erosive lichen planus.
- D. squamous cell carcinoma.

Which of the following is associated with Gardner syndrome?

- A. Osteosarcoma.
- B. Oligodontia.
- C. Osteomas.
- D. Osteomyelitis.

Which of the following muscles is most likely to be affected by a depressed fracture of the zygomatic arch?

- A. Lateral pterygoid.
- B. Temporalis.
- C. Masseter.
- D. Medial pterygoid.

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The greatest risk to dental health care personnel for acquiring a blood-borne pathogen is through

- A. blood spatter on intact skin.
- B. salivary contamination of clinic jackets.
- C. manufacturing defects in gloves.
- D. percutaneous injury.

Generalized redness and atrophy of the tongue are most often associated with

- A. lichen planus.
- B. burning mouth syndrome.
- C. endocrinopathy.
- D. nutritional deficiency.

The freeway space is

- A. the difference between occlusal vertical dimension and hinge axis registration.
- B. the difference between occlusal vertical dimension and rest vertical dimension.
- C. usually 10mm in the premolar region.
- D. the distance between maximum intercuspation and centric relation.

Polymerization reactions which create water or alcohol by-products are called

- A. addition reactions.
- B. ring-opening.
- C. cross-linking.
- D. condensation reactions.

The host defense mechanisms of the gingival sulcus do NOT include

- A. production of agglutinins and antibodies.
- B. flushing action of crevicular fluid.
- C. local antibody production.
- D. low tissue turnover rate.

Which of the following is NOT a malignant lesion of the gingiva?

- A. Neurofibroma.
- B. Proliferative verrucous leukoplakia.
- C. Sarcoma.
- D. Squamous cell carcinoma.

Over time, the effectiveness of a quartz tungsten halogen curing light will be

- A. improved.
- B. the same.
- C. reduced.

Over time, the effectiveness of a Light Emitting Diode curing light will be

- A. improved.
- B. the same.
- C. reduced.

Bonding composite to enamel is most appropriately performed by isolation with

- A. cotton rolls.
- B. rubber dam.
- C. cheek retractors.
- D. a matrix system.

A large, deeply furrowed tongue is commonly found in patients with

- A. Pierre Robin Syndrome.
- B. geographic tongue.
- C. ectodermal dysplasia.
- D. Down Syndrome.

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Which of the following posts are the most radiopaque?

- A. Zirconia.
- B. Titanium.
- C. Carbon fibre.
- D. Plastic.

All of the following are ways of characterizing the resistance of a material to permanent deformation EXCEPT

- A. yield stress.
- B. proportional limit.
- C. elastic limit.
- D. ultimate stress.

A material undergoing plastic deformation

- A. will typically fail in a sudden, catastrophic manner.
- B. is experiencing stress below its proportional limit.
- C. will recover its original dimensions upon unloading.
- D. is experiencing a breaking of bonds within the structure.

The presence of flaws or cracks in a material

- A. influences the strength of metals more than ceramics.
- B. leads to the development of stress concentrations.
- C. impacts compressive strength more than tensile strength.
- D. decreases its elastic modulus.

Increasing the crystalline content of a dental ceramic will generally decrease its

- A. fracture toughness.
- B. opacity.
- C. translucency.
- D. proportional limit.

For a ceramometal crown, the thermal expansion coefficient of the ceramic (porcelain) should be

- A. slightly lower than that of the underlying metal structure.
- B. equal to that of the underlying metal structure.
- C. slightly higher than that of the underlying metal structure.
- D. significantly higher than that of the underlying metal structure.

A cement base under an amalgam restoration should have

- A. high modulus and high thermal diffusivity.
- B. high modulus and low thermal diffusivity.
- C. low modulus and high thermal diffusivity.
- D. low modulus and low thermal diffusivity.

The failure of a commercially pure titanium dental implant to osseointegrate can potentially be attributed to each of the following EXCEPT

- A. type III/IV bone at the implant site.
- B. titanium oxide formation on the implant surface.
- C. habitual smoking.
- D. uncontrolled diabetes.

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All of the following display viscoelastic properties EXCEPT

- A. irreversible hydrocolloids.
- B. dental porcelain.
- C. silver amalgam.
- D. dentin.

All of the following are strategies for increasing the fracture toughness of dental ceramics EXCEPT

- A. slow cooling after sintering.
- B. tetragonal zirconia addition.
- C. self-glazing.
- D. crystalline phase dispersion.

Decreasing the amount of network modifiers in a dental porcelain will

- A. decrease its fusion temperature.
- B. increase its thermal expansion .
- C. decrease its chemical reactivity.
- D. increase its potential for devitrification upon heating.

An impression of a full metal crown preparation is made. Assessment of the impression reveals that there is superficial damage to an adjacent tooth not involving the proximal contact. At the next appointment, the most appropriate management is to

- A. cement the finished crown, then apply topical fluoride to the involved enamel surface.
- B. cement the finished crown, then polish the involved enamel using a polishing strip.
- C. polish the enamel surface and then cement the finished crown.
- D. polish the enamel surface and remake the impression and then cement a new crown.

A new patient is a heavy smoker and has severe periodontitis. When asked if interested in quitting smoking in the next month, the patient replies, "I don't smoke that much so it's not a big deal". What is the most appropriate strategy to encourage behaviour change?

- A. Encourage the patient to identify an alternate date to stop smoking.
- B. Explain the benefits of quitting smoking as soon as possible.
- C. Personalize the risk of continuing smoking to the patient's oral health.
- D. Ask the patient what would be the easiest first step to take toward quitting.

Which of the following has the largest effect on caries risk?

- A. Type of desserts eaten with meals.
- B. Total amount of sugar in the diet.
- C. Frequency of fermentable carbohydrate intake.
- D. Quality and range of nutrients in meals and snacks.

In cases of suspected fluoride overdose, following a call to medical emergency services, a patient should drink

- A. juice.
- B. milk.
- C. water.

To achieve adequate retention when placing a post in a molar tooth with a normal canal configuration, the post requires a

- A. length of 7 to 8mm.
- B. length equal to the restored crown height.
- C. parallel sided design.
- D. resin luting cement.

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Which of the following statements is correct with respect to root caries lesions?

- A. A specific microorganism causes root caries.
- B. Early lesions involve adjacent enamel.
- C. Colour of the lesion is a reliable indicator of caries activity.
- D. The majority of lesions begin interproximally.

Fluoridated toothpaste will be most effective in remineralizing

- A. smooth surface decalcification.
- B. interproximal caries.
- C. bruxism-related attrition.
- D. pit and fissure caries.

When a radiograph shows the inferior alveolar canal superimposed on an impacted mandibular third molar, the canal is

- A. usually on the lingual side of the tooth.
- B. usually of the buccal side of the tooth.
- C. usually passing through the tooth.
- D. equally likely to be on the buccal or lingual side of the tooth.

A lower molar requiring a crown has an extensive MOD amalgam restoration. The crown margin is most appropriately placed

- A. on the existing amalgam.
- B. at the amalgam/tooth junction.
- C. 1mm apical to the amalgam margin.

When closing a diastema with direct composite, care must be taken to ensure that

- A. only supragingival enamel is etched.
- B. primer is used to increase bond strength.
- C. glass-ionomer cement is used subgingivally.
- D. interproximal gingiva is adequately retracted.

When closing a diastema with direct composite, care must be taken to ensure that the

- A. width to height relationships are appropriate.
- B. entire embrasure is filled.
- C. restoration does not extend subgingivally.
- D. enamel is reduced 0.3 to 0.5mm prior to etching.

C-factor (configuration factor) is defined as the ratio of

- A. width to height in the upper anterior teeth.
- B. mercury to alloy in a dental amalgam.
- C. bonded to unbonded surfaces in a preparation.
- D. filler to monomer in a composite resin.

Which of the following is NOT typically associated with failed endodontic treatment?

- A. *Enterococcus faecalis*.
- B. *Actinomyces israelii*.
- C. *Streptococcus mutans*.
- D. *Candida albicans*.
- E. *Prevotella intermedia*.

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The tooth with the largest root surface area is the

- A. maxillary canine.
- B. maxillary first molar.
- C. mandibular canine.
- D. mandibular first molar.

The Bass tooth brushing technique is appropriate for oral hygiene instruction because

- A. plaque beneath the gingival margin is removed.
- B. debris is forced from the embrasures.
- C. the horizontal, vertical and circular motions.
- D. it increases circulation to the gingiva.

The stratified squamous epithelial layer of oral mucosa does NOT contain

- A. melanocytes.
- B. Langerhans cells.
- C. Merkel cells.
- D. Schwann cells.

A patient with leukoplakia had an incisional biopsy. Which of the following diagnosis does NOT require complete excision?

- A. Carcinoma *in situ*.
- B. Severe epithelial dysplasia.
- C. Hyperkeratosis.
- D. Invasive carcinoma.

Repeat panoramic radiographs are indicated to

- A. identify early signs of disease.
- B. follow-up a specific clinical concern or condition.
- C. monitor high caries risk patients.
- D. monitor patients with fixed dental prostheses.

In periodontal ligaments, enzymatic hydroxylation of proline and lysine residues on nascent procollagen requires

- A. vitamin C.
- B. lysyl oxidase.
- C. calcium ions.
- D. decorin.
- E. matrix metalloproteinase.

Sympathetic reflexes accompanying hemorrhage

- A. allow blood loss up to 60% of the total volume.
- B. have no effect on the amount of blood that can be lost.
- C. are part of the long-term compensatory response mechanism.
- D. have a greater effect on arterial pressure than on cardiac output.

What is the minimum number of nucleotides that can be deleted from a gene that will result in the smallest change in the amino acid sequence of the encoded protein?

- A. 1.
- B. 2.
- C. 3.
- D. 4.
- E. 5.

What are the dimensions of pain?

- A. Intensive and sensory.
- B. Sensory and peripheral.
- C. Affective and peripheral.
- D. Sensory and affective.

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Which of the following is NOT a contributor to the pathogenesis of stomatitis?

- A. TNF- $\alpha$ .
- B. Bradykinin.
- C. Substance P.
- D. Glucocorticoids.

Botulinum neurotoxins cause which type of paralysis?

- A. Spastic.
- B. Flaccid.
- C. Periodic.
- D. Brachiofacial.

When a painful muscle is palpated, the provoked pain is

- A. localized.
- B. referred to another area.
- C. described as a dull ache.
- D. described as a burning sensation.

Which of the following statements is INCORRECT?

- A. Chronic pain has somatosensory and psychosocial impacts.
- B. Pain persists only as long as the injury exists.
- C. Perception of acute and chronic pain involves the same regions of the CNS.
- D. Pain is a protective mechanism.

Which of the following bacterial components is considered to be of key importance in initiating and sustaining inflammatory responses in gingiva and other periodontal tissues?

- A. Fimbriae.
- B. Capsule.
- C. Lipopolysaccharides.
- D. Flagella.

During rapid head movement, that occurs on activities such as running, the mandible is held in place due to activation of

- A. temporomandibular proprioceptors.
- B. fast adapting periodontal pressoreceptors.
- C. slow adapting periodontal pressoreceptors.
- D. primary muscle spindle fibres.

Hypernatremia may be induced by

- A. elevated synthesis of atrial natriuretic peptide.
- B. excessive vasopressin secretion.
- C. impaired aldosterone secretion.
- D. diabetes insipidus.

Which of the following would NOT be expected to cause hypokalemia?

- A. Metabolic acidosis.
- B. Lactate accumulation.
- C. Increased plasma insulin.
- D. Excess aldosterone secretion.
- E. Beta-adrenergic stimulation of cells.

Dietary consumption of which of the following inhibits the cytochrome P450 system?

- A. Meat.
- B. Broccoli.
- C. Decaffeinated tea.
- D. Grapefruit juice.

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The principal cellular sites of the cytochrome P450 system are

- A. cardiomyocytes.
- B. pneumocytes.
- C. splenocytes.
- D. hepatocytes.

A hereditary condition affecting odontoblasts can result in

- A. regional odontodysplasia.
- B. fusion or gemination.
- C. dilaceration.
- D. hypercementosis.
- E. radicular dentin dysplasia.

Biopsy of a recent solitary painless ulcer on the lip in a 20 year old patient shows the presence of *Treponema pallidum*. The ulcer is called (a)

- A. lupus vulgaris.
- B. facies leprosa.
- C. chancre.
- D. noma.

The sensation of sour is mediated by

- A. transducin.
- B. protons blocking K<sup>+</sup> channels.
- C. gustducin.
- D. activation of T1R3 receptors.

Which of the following is NOT used to inhibit calcification of plaque?

- A. Fluoride.
- B. Magnesium.
- C. Pyrophosphate.
- D. Zinc.

Which of the following statements about chlorhexidine is INCORRECT?

- A. It disrupts bacterial cell membranes.
- B. It binds tenaciously to oral surfaces.
- C. It interferes with adherence of plaque-forming microorganisms.
- D. Mutans streptococci are preferentially destroyed.
- E. It is commonly used for long-term therapy.

Which of the following statements about sodium is correct?

- A. Salt-sensitive people should avoid foods like oranges and bananas.
- B. A high salt intake aggravates but does not cause hypertension.
- C. Renal sodium excretion varies indirectly with total sodium intake.
- D. The sodium recommendation is increased during pregnancy.

A patient wants to reduce her caries risk and asks her dentist to recommend an alternate sweetener that can be used in baking. Which of the following should NOT be recommended?

- A. Equal® (aspartame).
- B. Splenda® (sucralose).
- C. Sugar Twin® (sodium cyclamate).
- D. Xyla® (xylitol).

A 35 year old female patient has multiple petechial hemorrhages of the palatal mucosa and ecchymoses of the right and left buccal mucosae. Which of the following is the most likely laboratory finding?

- A. Anemia.
- B. Prolonged PTT.
- C. Elevated INR.
- D. Thrombocytopenia.

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A rotary endodontic file separates in the canal. The most appropriate management is to

- A. inform the patient of the separated file at the time of the incident.
- B. inform the patient of the separated file if the tooth becomes symptomatic.
- C. make a notation in the patient's chart without informing the patient.
- D. recommend an apicoectomy.

A patient has been receiving dental treatment over a period of 1 year. A root canal treatment has recently been started but not completed when she declares that her husband has lost his job and she is not able to pay the balance of the fee assessed for her root canal treatment. She is presently free of pain. The dentist can terminate treatment

- A. only after completion of the root canal treatment.
- B. for failure to honor financial commitments.
- C. until the patient is able to pay for it.
- D. only after completion of the root canal treatment and a full crown restoration.
- E. by referring the patient to an endodontist.

Five years ago, a 55 year old patient was treated for squamous cell carcinoma of the oral cavity with ablative surgery, chemotherapy and intensity-modulated radiotherapy. The posterior mandible received a dose of 70 Gy. The extraction of tooth 3.7 with local anesthesia is planned because the tooth cannot be restored. The most appropriate management is extraction with

- A. transfusion of packed red blood cells prior to the extraction.
- B. hyperbaric oxygen treatment prior to the extraction.
- C. hyperbaric oxygen treatment prior to and following the extraction.
- D. local anesthetic containing no vasoconstrictor.

Which of the following statements about fats/lipids is correct?

- A. Naturally occurring trans fats have been confirmed to increase disease risk.
- B. LDL-cholesterol is found in foods of only animal origin.
- C. Most of the cholesterol circulating in the human body is synthesized by the body.
- D. The essential fatty acids are only the omega-3 fats.

In the Vita® Classical Shade Guide, the hue of the D shade series is

- A. red.
- B. grey.
- C. yellow.
- D. brown.

In the Vita® Classical Shade Guide, the hue of the A shade series is

- A. red.
- B. grey.
- C. yellow.
- D. brown.

The percent of elderly persons known to colonize asymptomatic *C. difficile* in the gut is typically in a range of up to

- A. 3%.
- B. 10%.
- C. 30%.
- D. 50%.

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Which of the following statements regarding physiologic changes in an elderly patient is NOT correct?

- A. Reduced gastric emptying can lead to a decrease in drug absorption.
- B. Renal blood flow is decreased.
- C. Lipid soluble drugs remain in the body for a longer period of time.
- D. Relative tissue perfusion is unaltered.

Which of the following analgesics is CONTRAINDICATED for a 76 year old patient with angina?

- A. Acetaminophen.
- B. Ibuprofen.
- C. Codeine.
- D. Tramadol.

An 89 year old patient has rampant caries secondary to vestibular food pocketing. The LEAST likely predisposing disease is

- A. Parkinson's.
- B. Lewy body dementia.
- C. Alzheimer's.
- D. Addison's.

After latex gloves have been put on, washing the gloved hands with an antimicrobial soap

- A. adds a further layer of safety to barrier protection.
- B. is unnecessary but acceptable practice.
- C. can compromise the integrity of the glove.
- D. should be done if a surgical procedure is planned.

Infections transmitted in dental offices have been documented

- A. at a rate comparable to health care associated infections in hospitals.
- B. occasionally, primarily with hepatitis B.
- C. with equal frequency for viruses and bacteria.
- D. primarily in offices, which do not control bacterial levels in water from dental units.

The metabolic clearance of which of the following drugs is NOT reduced in an elderly patient?

- A. Carbamazepine.
- B. Warfarin.
- C. Morphine.
- D. Clindamycin.

Which of the following statements regarding physiologic changes in an elderly patient is correct?

- A. Creatinine production is reduced.
- B. Plasma albumin is increased.
- C. Relative tissue perfusion is unaltered.

What is the most common intraoral location of squamous cell carcinoma?

- A. Lateral tongue.
- B. Buccal mucosa.
- C. Tonsillar bed.
- D. Attached gingiva.

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A 20 year old has a solitary radiolucent lesion in the left maxillary tuberosity. The histologic diagnosis is an odontogenic keratocyst/keratogenic odontogenic tumour. What is the recurrence rate of this tumour?

- A. It does not recur.
- B. 10-30%.
- C. 40-60%.
- D. 70-90%.

A 74 year old patient being treated for hypertension requires deep scaling using local anesthesia. It is appropriate to defer treatment if the patient's blood pressure is equal to or above

- A. 120/80.
- B. 140/90.
- C. 160/110.
- D. 180/110.

A dentist who has been diagnosed as a chronic Hepatitis B carrier can perform exposure prone procedures

- A. using Standard precautions.
- B. in the absence of HBeAg.
- C. following a review by an Expert Panel.

Which of the following is LEAST likely to be associated with fissured tongue?

- A. Oral lichen planus.
- B. Melkersson-Rosenthal syndrome.
- C. Geographic tongue.

A feature of primary syphilis is

- A. atrophic glossitis.
- B. a gumma.
- C. a chancre.
- D. a mucous patch.

Which of the following is LEAST likely to share histological features with lichen planus?

- A. White sponge nevus.
- B. Oral mucosal cinnamon reaction.
- C. Oral graft-versus-host disease.
- D. Lupus erythematosus.

The palatine tonsils are found

- A. surfacing the posterior third of tongue dorsum.
- B. between the palatoglossal and palatopharyngeal arches.
- C. on the posterior wall of the nasopharynx.
- D. on the bilateral lateral ventral aspects of the tongue.

A 10 year old girl has poorly formed, distorted permanent right maxillary canine, lateral and central incisors. The remaining teeth and supporting structures are unremarkable. The patient most likely has

- A. ectodermal dysplasia.
- B. segmental odontomaxillary dysplasia.
- C. radicular dentin dysplasia.
- D. regional odontodysplasia.
- E. coronal dentin dysplasia.

A strong association exists between the presence of fissured tongue and the presence of

- A. geographic tongue.
- B. hairy tongue.
- C. lingual varicosities.
- D. median rhomboid glossitis.

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Which of the following is NOT a malignancy?

- A. Leukemia.
- B. Lymphoma.
- C. Leiomyoma.
- D. Melanoma.

The principal action of caffeine is on the

- A. cerebral cortex.
- B. corpus callosum.
- C. hypothalamus.
- D. spinal cord.

A tissue-level implant should be used when

- A. the edentulous site is in the esthetic zone.
- B. platform switching is desired.
- C. a 2-stage surgical approach is planned.
- D. ease for oral hygiene is desired to preserve crestal bone.

A 3 year old complains of a sore left arm for 10 days. A physician has diagnosed a fracture and a radiograph reveals an old fracture. The most appropriate diagnosis is

- A. infantile osteoporosis.
- B. osteogenesis imperfecta.
- C. battered child syndrome.
- D. Münchhausen syndrome.

Crestal bone loss around implants prior to occlusal loading is more significantly associated with

- A. smooth collars.
- B. roughened collars.
- C. internal connections.
- D. external connections.

Dentists may choose NOT to provide treatment for a patient when the

1. treatment cannot be completed in a timely fashion.
2. patient has a serious communicable disease.
3. dentist does not have sufficient training for procedure.
4. treatment is for an urgent situation.

In which of the following conditions is there a risk of malignant change after radiotherapy?

- A. Fibrous dysplasia.
- B. Mucocele.
- C. Lymphangioma.
- D. Torus palatinus.

- A. (1) and (3)
- B. (2) and (4)
- C. (1) (2) (3)
- D. (4) only
- E. All of the above.

Patients who are positive for the interleukin-1 (IL-1)

- A. are at increased risk for severe periodontal disease.
- B. have a decreased inflammatory response in the presence of bacteria.
- C. are more likely to respond favourably to periodontal therapy.
- D. have decreased bacterial pathogens associated with active periodontal disease.

Which of the following CANNOT be viewed on a lateral cephalometric radiograph?

- A. Upper airway clearance.
- B. Mandibular dimensions.
- C. Maxillary constriction.
- D. Lower face height.

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A 70 year old patient was diagnosed with squamous cell carcinoma of the lateral border of the tongue. The tumour measures 3.5 x 3.0 cm. A CT of the neck confirms the presence of a 2.5 cm ipsilateral submandibular lymph node suggestive of locoregional disease. Chest X-rays and liver function tests were within normal limits. The TNM classification of this patient's disease is

- A. T1N1M0.
- B. T1N2M0.
- C. T2N1M0.
- D. T2N2M1.

A 65 year old, underweight patient confirms a longstanding problem with alcohol abuse. The medical history reveals complaints of muscle weakness, low appetite, lack of energy and forgetfulness, which the patient attributes to getting old. The patient's diet is most likely deficient in

- A. ascorbic acid.
- B. folic acid.
- C. thiamin.
- D. retinol.

A patient with bulimia who purges several times a day should be advised to increase intake of

- A. lean chicken.
- B. bananas.
- C. whole wheat bread.

A 55 year old patient wants to maintain bone mass following implant surgery and plans to take extra calcium. Supplemental calcium is most beneficial when consumed in

- A. divided doses with meals.
- B. divided doses between meals.
- C. a single dose with meals.
- D. a single dose between meals.

Which of the following is NOT a clinical finding of hypothyroidism?

- A. Anxiety.
- B. Mild tremor.
- C. Puffy eyelids.
- D. Exophthalmos.

What is the most likely diagnosis of a 9 year old with speech problems, macroglossia, unilateral premature eruption of teeth, and moderate scoliosis?

- A. Down syndrome.
- B. Hemi hypertrophy.
- C. Gigantism.
- D. Cleidocranial dysplasia.

Upon returning to the operatory, the dentist notices the patient is looking at the dental chart. Which of the following statements is correct?

- A. The patient has a legal right to access the chart at any time.
- B. The dentist can charge an administrative fee to the patient to view the chart.
- C. A written request is required before access to the chart can be granted.

Which of the following has both ectodermal and mesodermal tissues?

- A. Ameloblastoma.
- B. Cementoblastoma.
- C. Odontoma.
- D. Odontogenic myxoma.

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A 75-year old female patient is being treated for oral lichen planus with a topical corticosteroid. She also has low vitamin D. The most likely cause of a reduced alveolar bone mass in this patient is

- A. postmenopausal osteoporosis.
- B. senile osteoporosis.
- C. drug-induced osteoporosis.
- D. osteomalacia.

Pleomorphic adenomas are most likely to exhibit

- A. rapid growth with death of patient.
- B. early metastasis.
- C. slow growth but tendency to local recurrence.
- D. early ulceration and hemorrhage.

The findings from a meta-analysis of 24 clinical trials conducted over 20 years, involving vitamin D supplementation to prevent dental caries in children aged 5-14 years, reveal there is wide variation in the results between the studies. Which of the following differences is LEAST likely responsible for this variation?

- A. Age of the children.
- B. Stage of dentition of children.
- C. Years when the studies were conducted.
- D. Baseline caries levels of children.

An article reports that subjects receiving chlorhexidine varnish had significantly lower ( $p < 0.05$ ) *Streptococcus mutans* levels than did those receiving fluoride varnish. What type of reporting error is of the most concern when interpreting these results?

- A. Type II ( $\beta$ ) error.
- B. Type I ( $\beta$ ) error.
- C. Type II ( $\alpha$ ) error.
- D. Type I ( $\alpha$ ) error.

What is the most appropriate design for a study that is started after the exposure to a risk factor but before the disease started?

- A. Case series.
- B. Randomized trial.
- C. Case-control.
- D. Cohort.

Patterns of exposure to a risk factor in a population is important because it helps

- A. understand where preventive interventions can be targeted.
- B. define the prevalence of a disease.
- C. define the population attributable fraction of a disease.
- D. give an insight into what statistical tests to use.

A study has been conducted comparing rates of dental caries in 25 cities with differing levels of fluoride in the water supply. This study is a/an

- A. cross-sectional study.
- B. community trial.
- C. ecological study.
- D. case series.

To assess factors affecting the utilization of dental services, a cross-sectional study surveyed adults on a number of variables. Considering the study design, which of the following findings CANNOT be derived from the results?

- A. Satisfaction with the services.
- B. Gender differences.
- C. Caries incidence.
- D. Utilization of dental services.

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A study examined caries in 349 children 2 to 6 years of age living in the Northwest Territories. The odds ratio for severe caries based upon whether the child drank milk was 0.44 (95% CI = 0.23 to 0.84). Which of the following is the most appropriate interpretation of these results? Drinking milk

- A. was protective against caries.
- B. was not protective against caries.
- C. had no effect on caries.

The Root Caries Index may underestimate the amount of disease because

- A. the number of surfaces at risk cannot be determined.
- B. it excludes subgingival lesions.
- C. root caries is difficult to diagnose.
- D. it treats filled and decayed surfaces as the same.

Examination of a 32 year old pregnant woman reveals that she has generalized periodontal probing depths of 4-6mm, most of which bleed on probing. She is otherwise healthy, but asks "If I don't get the proper periodontal treatment, am I more likely to deliver a pre-term, low-birth weight baby?" Which type of study design would provide the best answer to her question?

- A. A prospective cohort involving pregnant women, some of whom have periodontal disease and some of whom do not.
- B. A randomized clinical trial of pregnant women with periodontal disease, some of whom receive periodontal therapy and some of whom do not.
- C. Comparing the rates of pre-term low birth weight babies, between women with no risk factors to those with periodontal disease.
- D. A systematic review comparing the risk of delivering pre-term low birth weight babies among women with various risk factors, including the presence of periodontal disease.

For patients with prion disease such as Creutzfeldt-Jacob disease,

- A. the disease is transmissible through air or by casual contact.
- B. no additional precautions beyond standard procedures are recommended for dental treatment.
- C. the disease is usually fatal within one year.
- D. the disease has an incubation time of 3-6 months.

Two millimeters of maxillary incisor spacing in a 3 year old is indicative of a

- A. tooth size-arch size discrepancy.
- B. maxillary Bolton deficiency.
- C. persistent tongue thrusting.
- D. normal pattern of development.

A survey of a random sample of 5,586 Canadians found that 63% of older adults had visited a dentist in the last year. The 95% confidence interval was 56% to 70%. This means that

- A. between 56% and 70% of older adults account for 95% of the dental visits.
- B. there is 95% certainty that 63% of older adults had dental visits.
- C. no more than 70% of dental visits occurred in 95% of older adults.
- D. there is 95% certainty that 56% to 70% of older adults had dental visits.

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A group of researchers would like to study the relationship between oral health status in childhood and adult systemic health conditions. They have found a 40 year old database that contains information on the oral health of children along with their names. They plan on linking this information with current administrative health care data to conduct this research. What ethical concern(s) would the researchers have to consider?

- A. Selection bias.
- B. Privacy and confidentiality.
- C. Beneficence.
- D. Justice.

In addition to the advancement of knowledge, health research is intended to produce value for research subjects, for other individuals, and/or for society as a whole. What ethical principle does this refer to?

- A. Autonomy.
- B. Non-maleficence.
- C. Beneficence.
- D. Justice.

The purpose of calibrating examiners in a randomized controlled clinical trial is to ensure

- A. consistent measurement of clinical outcomes.
- B. similarity of experimental and control groups.
- C. high ethical standards in conducting the trial.
- D. measurement of all relevant clinical outcomes.

Which of the following studies provides the best evidence for the possible association between community water fluoridation and hip fracture?

- A. Ecological.
- B. Case-series.
- C. Cross-sectional.
- D. Retrospective cohort.

A double blind controlled clinical trial that assessed the analgesic effects of etoricoxib and comparator agents on the second and third days after third molar extraction included 600 officers from dental clinics at 10 military bases. What form of bias is present in this study?

- A. Publication.
- B. Recall.
- C. Sampling.
- D. Selection.

Meta-analyses are important to the practice of dentistry because they

- A. minimize publication bias.
- B. define who is at risk for a disease.
- C. guide statistical testing for clinical procedures.
- D. provide a quantitative summary measure from many studies.

Which of the following clinical protocols is the most appropriate next step in the management of an avulsed permanent tooth, which has just been replanted?

- A. Splinting with composite resin only.
- B. Splinting with flexible wire.
- C. Splinting with rigid wire.
- D. Pulpectomy.

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Which of the following types of permanent teeth is more likely to present with a C-shape canal anatomy?

- A. Mandibular first premolars.
- B. Maxillary first premolars.
- C. Mandibular second molars.
- D. Maxillary second molars.

A 3 year old presents 30 minutes after facial trauma. Tooth 5.1 is avulsed. The father has recovered the tooth and has kept it in a wet napkin. Which of the following is the most appropriate management?

- A. Replant the tooth followed by endodontic treatments in 2 weeks.
- B. Perform a pulpectomy, then replant the tooth.
- C. Replant the tooth and monitor for possible endodontic treatment.
- D. Do not replant the tooth.

The highest incidence of congenitally missing lateral incisors is most likely seen in a patient with

- A. unilateral cleft lip and palate.
- B. congenital heart disease.
- C. Down's syndrome.
- D. hyperthyroidism.

Caries disclosing solution used during the excavation of a deep carious lesion will determine the extent of

- A. infected dentin.
- B. affected dentin.
- C. inorganic dentinal matrix demineralization.
- D. reversibly denatured dentinal matrix.

What is the minimum CD4 count to perform elective dental treatment?

- A. 100 cells/mm<sup>3</sup>.
- B. 200 cells/mm<sup>3</sup>.
- C. 300 cells/mm<sup>3</sup>.
- D. 400 cells/mm<sup>3</sup>.
- E. 1000 cells/mm<sup>3</sup>.

The teeth of a Miller bone file are designed to smooth bone with a

- A. pull stroke.
- B. push stroke.
- C. sawing motion.
- D. circular motion.

A 30 year old male suffers an orbital injury. How many bones form the orbit?

- A. 4.
- B. 5.
- C. 6.
- D. 7.
- E. 8.

In a sagittal split osteotomy of the mandible, the neurovascular bundle should remain in which segment of the mandible?

- A. Proximal.
- B. Distal.
- C. Lateral.
- D. Condylar.

Most commonly, palatal exostoses occur at the level of

- A. incisors.
- B. canines.
- C. premolars.
- D. molars.

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A significant anatomic difference between the peri-implant marginal soft tissue and the gingival marginal tissue of a tooth exists in the

- A. epithelial attachment.
- B. type of collagen.
- C. vascular supply.
- D. sulcular epithelium.

The most likely cause of localized facial gingival recession in a healthy 17 year old individual is

- A. minimal attached gingiva.
- B. occlusal trauma.
- C. traumatic toothbrushing.
- D. factitious injury.

Periodontitis as a manifestation of systemic disease as described in the Armitage 1999 classification includes

- A. diabetes.
- B. leukemia.
- C. atherosclerosis.
- D. osteoporosis.

Which of the following is true about the supraeruption of unopposed molars?

- A. Supraeruption occurs 60% of the time.
- B. Supraeruption is more prevalent in the mandibular arch.
- C. Unopposed molars have a mean supraeruption of 3.0mm.
- D. Attachment loss is one of the main predictors.

Which of the following sites is formed exclusively by endochondral bone ossification?

- A. Cranial vault.
- B. Cranial base.
- C. Maxilla.
- D. Mandible.

A 4 year old has generalized bone loss, mobile teeth and generalized calculus. Which condition should NOT be included in the differential diagnosis?

- A. Cyclic neutropenia.
- B. Papillon-Lefèvre syndrome.
- C. Chédiak-Higashi syndrome.
- D. Crouzon syndrome.
- E. Leukocyte adhesion deficiency syndrome.

Proportionally, how far below the superior border of the lower  $\frac{1}{3}$  of the face are the commissures of the mouth located?

- A. At the commissures.
- B.  $\frac{1}{4}$ .
- C.  $\frac{1}{3}$ .
- D.  $\frac{2}{3}$ .
- E.  $\frac{3}{4}$ .

A3 shades of composite resins should be light-cured in increments limited to a maximum of

- A. 0.50mm.
- B. 1.00mm.
- C. 1.50mm.
- D. 2.00mm.

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The maximum recommended number of 1.8ml cartridges of 2% lidocaine with epinephrine 1:100,000 that may be safely administered to a 17kg child is approximately

- A. 0.5.
- B. 1.
- C. 1.5.
- D. 2.
- E. 2.5.

The manufacturer's maximum recommended number of 1.8ml cartridges of 3% mepivacaine that may be safely administered to a 65kg adult is

- A. 5.
- B. 6.
- C. 7.
- D. 8.
- E. 9.

Ideally, within how many hours should one receive medical attention for percutaneous exposure to blood borne pathogens?

- A. 2.
- B. 4.
- C. 6.
- D. 8.

Which of the following viruses has the greatest chance of transmission in an occupational exposure to a vaccinated dental healthcare worker?

- A. Hepatitis B.
- B. Hepatitis C.
- C. HIV.
- D. HPV.

The most appropriate gingival contour of a fixed partial denture connector is

- A. concave.
- B. convex.
- C. flat.

Which of the following restorations is the most appropriate for the replacement of a maxillary permanent lateral incisor where there is 4.5mm of mesial-distal space and an intact central incisor?

- A. Implant supported restoration.
- B. Cantilever pontic FPD using canine abutment.
- C. Removable partial denture.
- D. Three-unit metal-ceramic full-coverage fixed dental prosthesis.

When cavitated carious lesions are present there is

- A. exposure of the dentin protein matrix.
- B. demineralization by matrix metalloproteinases.
- C. bacterial protease inhibition.
- D. a denatured inorganic phase.

A young adult has generalized areas of chalky, opaque, cavitated lesions on the vestibular surface of multiple teeth and interproximal gingiva that is red and swollen. Which of the following is the most appropriate diagnosis?

- A. Smooth surface caries.
- B. Rampant caries.
- C. Interproximal caries.
- D. Secondary caries.
- E. Arrested caries.

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A fixed partial denture is an appropriate treatment option for replacing a missing mandibular first permanent molar when the

- A. adjacent teeth are heavily restored.
- B. incisors and contralateral molars are missing.
- C. abutment crown to root ratios are 1:1.
- D. second and third molars are tipped mesially.

An alginate impression is made of the maxillary arch and there is abundant unset alginate remaining on the teeth. Excess of which of the following components may contribute to the slow setting?

- A. Zinc oxide.
- B. Calcium sulfate.
- C. Potassium alginate.
- D. Sodium phosphate.

Which of the following statements is correct about Quantitative Light or Laser Induced Fluorescence used to aid in the early detection of caries?

- A. Low specificity when used to detect smooth surface caries.
- B. Unable to detect caries around existing restorations.
- C. High sensitivity when used to detect interproximal caries.
- D. Assesses light reflection as opposed to light transmission.

Which of the following analyses is most appropriate for use in an adult patient?

- A. Moyers.
- B. Bolton.
- C. Tanaka-Johnston.

Which type of headgear is most appropriate for the management of a 10 year old patient with an increased lower third of the face, incompetent lips, an Angle Class II malocclusion and vertical maxillary excess?

- A. High-pull.
- B. Cervical.
- C. Combination.
- D. Protraction.

A 9 year old patient has a right posterior crossbite and a mandibular midline shift to the right. Which of the following is the most appropriate appliance for this patient?

- A. Headgear.
- B. Hyrax appliance.
- C. Fixed brackets.
- D. Functional appliance.

The thickness of the labial bony wall of a maxillary anterior tooth is typically

- A. < 1mm.
- B. 1 - 2mm.
- C. > 2mm.

A large Class III preparation on tooth 1.1 extends 2mm on the labial, 4mm on the lingual and onto the root surface. Which of the following cavosurface margins should be prepared at 90 degrees?

- A. Incisal.
- B. Gingival.
- C. Labial.
- D. Lingual.

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Which procedure(s) require(s) antibiotic prophylaxis in a patient susceptible to bacterial endocarditis?

1. Impressions for partial dentures.
  2. Suture removal.
  3. Mandibular block anesthetic injection.
  4. Periodontal surgery.
- A. (1) (2) (3)  
B. (1) and (3)  
C. (2) and (4)  
D. (4) only  
E. All of the above.

An accurate interproximal probing depth is obtained by walking the probe parallel to the long axis of the tooth until the

- A. line angle is reached, then angling at least 45° to reach the col area.  
B. line angle is reached, then angling slightly to reach the col area.  
C. contact area is reached, then angling slightly to reach the col area.  
D. contact area is reached, then angling at least 45° to reach the col area.

Which of the following does NOT contribute to the porcelain to metal bond in metal-ceramic crown restorations?

- A. Removing the chemical debris from the metal surface.  
B. Forming a mixed oxide layer between the porcelain and the metal.  
C. Adding Sn, In and Fe to the metal.  
D. Creating a thick oxide layer on the metal.

A delayed allergic reaction is called a

- A. Type I reaction.  
B. Type II reaction.  
C. Type III reaction.  
D. Type IV reaction.

The hybrid layer is composed of resin tags and

- A. decalcified peritubular dentin.  
B. intertubular dentin.  
C. resin plugs in the dentin surface.  
D. bonding agent at the interface.

When designing a removable partial denture, undercuts are found in which area of teeth?

- A. Height of contour.  
B. Suprabulge area.  
C. Proximal guide plane.  
D. Infrabulge area.

According to the Glickman classification for furcation involvement, a Grade I furcation is a/an

- A. incipient or early stage furcation involvement.  
B. furcation lesion that is essentially a cul-de-sac with a definite horizontal component.  
C. probeable vertical depth of 1 to 3mm.  
D. probeable horizontal depth of 1 to 3mm.

During periodontal wound healing, when osteoclasts reach the root surface first, this will result in

- A. a long junctional epithelial attachment.  
B. connective tissue adhesion.  
C. root resorption and/or ankylosis.  
D. regenerated periodontium.

The primary etiological factor associated with periodontal disease is

- A. bacterial plaque.  
B. calculus.  
C. diabetes mellitus.  
D. tooth mobility.  
E. smoking.

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The depth of penetration of a periodontal probe in a sulcus is LEAST affected by the

- A. amount of clinical attachment loss.
- B. diameter of the probe.
- C. force used on the probe.
- D. level of inflammation.

The concept of continuous tooth eruption is described as

- A. the movement of the teeth in the direction of the occlusal plane.
- B. the exposure of teeth via apical migration of the gingiva.
- C. consisting of both an active and a passive phase.
- D. being complete when teeth reach their functional antagonists.

Which of the following disinfectant is NOT appropriate for dental impressions?

- A. Phenols.
- B. Iodophors.
- C. Chlorine compounds.
- D. Formaldehyde.
- E. Glutaraldehydes.

Which of the following is NOT a clinical predictor of successful vital pulp therapy?

- A. Preoperative health of the pulp.
- B. Elimination of the source of inflammation.
- C. Exclusion of future microbial microleakage.
- D. Presence of calcifications within the root canal.

After a tooth has had nonsurgical endodontic treatment, which of the following is NOT an indication for additional endodontic intervention?

- A. Presence of clinical signs and symptoms.
- B. Presence of a periradicular radiolucency.
- C. Enlargement of the original periradicular radiolucency.
- D. Development of a periradicular radiolucency.

The most complex surgical procedure where there is a bone defect is implant placement with

- A. simultaneous membrane application.
- B. the osteotome technique.
- C. bone splitting the alveolar crest.
- D. sinus floor elevation with window technique.

The rotational path of insertion for the Class IV partially edentulous patient uses which of the following components for direct retention on the anterior abutments?

- A. Cingulum rests.
- B. Cast I-bars.
- C. Double embrasure clasps.
- D. Proximal plates.

The most appropriate management for the replantation of an avulsed permanent tooth is

- A. upon arrival at a dental clinic, within 60 minutes of avulsion.
- B. upon arrival at a dental clinic, after soaking it in saline for 5 minutes.
- C. on the site where avulsion happened, immediately after avulsion.
- D. on the site where avulsion happened, after soaking it in milk for 5 minutes.

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Which of the following traumatic injuries does NOT require immediate management?

- A. Avulsion.
- B. Alveolar fracture.
- C. Uncomplicated crown-root fracture.
- D. Extrusion.

Osteoradionecrosis and medication related osteonecrosis

- A. have identical pathophysiology.
- B. demonstrate similar clinical presentation.
- C. occur more frequently in the maxilla.
- D. can be prevented by hyperbaric oxygen therapy.

A patient with suspected hyperthyroidism may display all of the following early symptoms EXCEPT

- A. fine and brittle hair.
- B. excessive sweating.
- C. tachycardia.
- D. weight loss.
- E. tendency to bruise easily.

A 5 year old has an enamel fracture of tooth 6.1. What is the most appropriate immediate management?

- A. Pulpotomy.
- B. Smooth sharp edges.
- C. Pulpectomy.
- D. Extraction.

Restoration of non-carious cervical lesions may be the appropriate management in all of the following situations EXCEPT when

- A. the area is to be included in a partial denture design.
- B. there is increasing thermal sensitivity.
- C. a brown lesion is present in an elderly patient.
- D. the defect compromises structural integrity of the tooth.

Which of the following is an indication for the use of occlusal sealants?

- A. Teeth showing signs of opacity in pits or fissures.
- B. Teeth that have remained caries-free for 4 years and more.
- C. Teeth that have proximal cavitated lesions.
- D. Patient's water supply is non-fluoridated.

Which of the following dentinal caries zones is capable of remineralization?

- A. Infected.
- B. Turbid.
- C. Transparent.

Initial caries of enamel has which of the following shape in pits and fissures?

- A. Inverted V-shape (base towards dentino-enamel junction).
- B. V-shape (apex towards dentino-enamel junction).
- C. Inverted U-shape (base towards dentino-enamel junction).
- D. U-shape (apex towards dentino-enamel junction).

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Bacteria that are strongly associated with the onset of caries are

- A. Streptococcus mutans.
- B. Lactobacillus casei.
- C. Veillonella alcalescens.
- D. Enterococcus faecalis.
- E. Actinomyces viscosus.

Which of the following should be corrected through orthodontic intervention?

- A. Maxillary mesiolingual cusps that interdigitate with the central fossa of the mandibular molars.
- B. Maxillary mesiobuccal cusp tips that contact the mandibular mesiobuccal cusp tips.
- C. Angle Class I occlusion with 30% overbite and 2mm overjet with mild maxillary spacing.
- D. Angle Class II molar relationship with 30% overbite, 2mm overjet and good arch alignment.

In a mixed dentition analysis, using the Moyers statistical method, choosing a 75% probability factor means that the mass of permanent teeth is

- A. underestimated.
- B. overestimated.
- C. accurately predicted.
- D. unpredictable.

The two main conditions complicating the correction of a single tooth anterior crossbite are

- A. lack of spacing and increased overbite.
- B. lack of spacing and decreased overbite.
- C. an increased overbite and a large labial frenum.
- D. a decreased overbite and a large labial frenum.

Which of the following is the most acceptable extraction pattern in the management of an Angle Class II malocclusion in a non-growing patient? Extraction of

- A. mandibular first or second premolars.
- B. maxillary first or second premolars.
- C. mandibular incisors.
- D. maxillary first molars.

Immediately following a left posterior superior alveolar nerve block injection, the patient's face becomes quickly and visibly swollen on the left side. The immediate treatment should be to

- A. apply a cold compress.
- B. administer 0.3 mg epinephrine sublingually.
- C. apply a hot compress.
- D. refer for immediate medical treatment.

Epinephrine in local anesthetic solutions

- A. increases the duration of anesthesia.
- B. reduces the likelihood of an allergic reaction.
- C. balances the pH of the solution.

In order to prevent gingival recession, a full gold crown should have

- A. a slightly narrow food table.
- B. a slightly overcontoured tooth form.
- C. normal contour reproduced.
- D. the margins extended 1mm subgingivally.

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The principal internal retention for a Class V amalgam cavity preparation is established at the

- A. occluso-axial and gingivo-axial line angles.
- B. mesio-axial and disto-axial line angles.
- C. mesio-gingival and disto-gingival line angles.

Proximal retention grooves are necessary to provide resistance for proximal-occlusal amalgam restorations when the

- A. occlusal extension is wide faciolingually relative to the proximal extension.
- B. restoration is a pin-retained cusp replacement.
- C. occlusal extension is narrow faciolingually relative to the proximal extension.
- D. bonded amalgam technique is not being used.

For a Class II amalgam restoration, if the liner extends to the gingival cavosurface margin, it is likely that

- A. liner dissolution will lead to leakage.
- B. the tooth will have reduced temperature sensitivity.
- C. the preparation will have reduced resistance to fracture.
- D. the liner will leach fluoride and provide caries resistance.

Hyperemia of the pulp is

- A. an acute inflammation with intermittent paroxysms of pain which may become continuous.
- B. an increased volume of blood within dilated vessels and increased blood flow.
- C. a chronic situation whereby minute arterioles of pulpal tissue are engorged for long periods creating temporary episodes of pain.
- D. a transient invasion of bacterial elements into the outer lying stroma of the pulpal tissue.

The mesial and distal walls of a Class I amalgam preparation diverge toward the occlusal surface in order to

- A. resist the forces of mastication.
- B. provide resistance and retention form.
- C. prevent undermining of the marginal ridges.
- D. extend the preparation into areas more readily cleansed.

Gutta-percha may be softened or dissolved within the root canal by using

- A. alcohol.
- B. ethyl chloride.
- C. eugenol.
- D. xylene (xylol®).

The pulpal floor of a Class II cavity is cut perpendicular to the long axis of the tooth EXCEPT in the

- A. maxillary first premolar.
- B. maxillary second premolar.
- C. mandibular second premolar.
- D. mandibular first premolar.

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Radiographically, a keratocystic odontogenic tumour (odontogenic keratocyst) can appear as a

- A. mixed radiolucency and radiopacity.
- B. radiolucency around the crown of an impacted tooth.
- C. radiolucency containing multiple rudimentary teeth.

The tissue which cannot be seen on dental radiographs is

- A. dentin.
- B. enamel.
- C. cementum.
- D. pulp.
- E. periodontal ligament.

The lamina dura is

- A. cortical bone.
- B. spongy bone.
- C. immature bone.
- D. a cribiform plate perforated by nutrient canals.
- E. None of the above.

Multiple neurofibromatosis and "café au lait" spots on the skin are typical of

- A. Gardner's syndrome.
- B. Plummer-Vinson syndrome.
- C. Von Recklinghausen's disease.
- D. Down syndrome.

Extreme widening of the periodontal ligament may be seen in

- A. Parkinson's disease.
- B. Raynaud's disease.
- C. Bell's palsy.
- D. Osteosarcoma.
- E. Ménière's syndrome.

In an adult, continued growth of the mandibular condyles, an increase in size of the bones and soft tissues of the hands, feet, supraorbital ridges and air sinuses suggest

- A. Addison's disease.
- B. hyperthyroidism.
- C. pituitary adenoma.
- D. gigantism.

Generalized widening of the periodontal ligament space is a radiologic characteristic of

- A. lupus erythematosus.
- B. scleroderma.
- C. Stevens-Johnson syndrome.
- D. osteitis deformans.
- E. acromegaly.

Which of the following is the most appropriate early management for a patient with primary herpetic gingivostomatitis? Prescribing

- A. corticosteroids locally and systemically.
- B. a systemic antiviral.
- C. a systemic antibiotic.
- D. a systemic antifungal.

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In an adult, progressive increase in mandibular length and interdental spacing is a feature of

- A. hyperparathyroidism.
- B. hyperpituitarism.
- C. hyperthyroidism.
- D. Addison's disease.
- E. Cushing's disease.

A person who has sickle cell anemia may show certain radiographic changes in the bones of the skull. These changes may be

- A. "punched-out" radiolucent lesions.
- B. a moth-eaten appearance of the bone.
- C. gross irregularities with exostosis formation.
- D. a "hair on end" effect.

Which one of the following tests is used to confirm the presence of an acute infection?

- A. Erythrocyte sedimentation rate.
- B. Urinalysis.
- C. Differential white cell count.
- D. Serum alkaline phosphatase.

Which of the following may be used as a local anesthetic in a patient allergic to both amide and ester-type local anesthetics?

- A. Nitrous oxide.
- B. Bupivacaine.
- C. Phenylephrine.
- D. Diphenhydramine.
- E. Ethyl aminobenzoate.

The greatest period of cranial growth occurs between

- A. birth and 5 years.
- B. 6 and 8 years.
- C. 10 and 12 years.
- D. 14 and 16 years.

The most significant factor in determining the prognosis of anterior crossbite correction is the

- A. age of patient.
- B. depth of the overbite.
- C. shape of the tooth involved.
- D. space available mesiodistally.

A 6 year old has an open bite caused by active thumbsucking. The most appropriate management is to

- A. insert a habit-breaking appliance.
- B. refer to a psychologist for evaluation.
- C. encourage habit cessation and observe.
- D. bond limited fixed bracket.

Bone tissue grows by

- A. interstitial growth.
- B. osteoclastic activity.
- C. proliferation of endodermal tissue.
- D. differentiation of cartilaginous tissue.

Following premature deciduous tooth loss, space loss occurs most frequently in the area of the

- A. maxillary lateral incisor.
- B. mandibular central incisor.
- C. mandibular second premolar.
- D. maxillary first premolar.

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The most appropriate treatment for an 11 year old who has intermittent swelling and pain associated with a central incisor which was traumatized 6 months ago is

- A. pulpotomy.
- B. pulpectomy.
- C. extraction.
- D. observation.

In a 5 year old, a small mechanical exposure in a vital primary molar would be treated by

- A. extraction of the tooth.
- B. a pulp capping with calcium hydroxide.
- C. a routine amalgam restoration without any specific treatment for the exposed pulp.
- D. the use of a cavity liner.

An indirect pulp capping procedure for primary molar teeth is indicated when

- A. caries involves dentin to a depth of 1mm.
- B. there is continuous pain.
- C. there is radiolucency in the bifurcation.
- D. removal of caries will lead to pulp exposure.

A 7 year old child who complains of pain when eating, has a large carious lesion on a permanent molar. A radiograph reveals no periapical change. The most appropriate treatment is a/an

- A. indirect pulp capping.
- B. direct pulp capping.
- C. partial pulpotomy.
- D. pulpotomy.

Which of the following is essential for successful periodontal treatment?

- A. Scaling.
- B. Final evaluation and maintenance on a one-year recall.
- C. Periodontal flap surgery.
- D. Elimination of local etiologic factors.

The radiographic term used to describe the dense bone of the socket and septal crest is

- A. periodontal ligament space.
- B. cancellous bone.
- C. cribriform plate.
- D. lamina dura.
- E. cortical bone.

The physiologic wear of hard dental tissue resulting from mastication is known as

- A. decalcification.
- B. attrition.
- C. abrasion.
- D. erosion.

In taking an impression with polysulfide or silicone materials, if the heavy bodied tray material begins to set before seating, the resultant die will

- A. not be affected dimensionally.
- B. be overall smaller.
- C. be overall larger.
- D. develop a rough surface texture.
- E. develop bubbles at the interface of the syringe and tray material.

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In soldering nickel-cobalt-chromium alloys and stainless steel, the function of the fluoride flux is

- A. to lower the melting temperature of the solder.
- B. to reduce the copper-oxide content of the alloy.
- C. to stop the flow of the molten solder onto undesired areas.
- D. to reduce the formation of chromium oxide during soldering.

A "broken stress" or "non-rigid" connector is indicated for a fixed partial denture when

- A. the retainers can be so prepared as to have equal retentive qualities.
- B. 2 or 3 teeth are to be replaced.
- C. constructing a mandibular fixed prosthesis.
- D. the abutments cannot be prepared in parallel without excessive removal of tooth structure.

Clasps should be designed so that upon insertion or removal of a partial denture the reciprocal arms contact the abutment teeth when the retentive arms pass over the height of contour in order to

- A. prevent distortion of the clasps.
- B. assure complete seating of the framework.
- C. provide needed support to abutment teeth during a period of added stress.

The line drawn through the occlusal rests of two principal abutments for a removable partial denture is the

- A. survey line.
- B. terminal line.
- C. axis of rotation.
- D. line of greatest torque.

A patient wearing complete dentures has angular cheilitis. The most likely cause is

- A. increased vertical dimension.
- B. insufficient horizontal overlap (overjet).
- C. decreased vertical dimension.
- D. excessive vertical overlap (overbite).

The stiffness of a material can best be described by the

- A. modulus of elasticity.
- B. percentage elongation.
- C. modulus of resilience.
- D. elastic limit.

An excessively thick palatal bar of a maxillary partial denture will

- A. cause injury to the abutment teeth.
- B. distort under occlusal stress.
- C. irritate the palatal tissues.
- D. cause difficulty in swallowing.

A distal extension removable partial denture is one that receives its support

- A. from the tissues only.
- B. mostly from the tissues.
- C. mostly from the abutment teeth.
- D. equally from the abutment teeth and the tissues.

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For a patient with new complete dentures, errors in centric occlusion are best adjusted by

- A. directing the patient to close the jaws, bringing the teeth into occlusion.
- B. having the patient close in centric occlusion and making a transfer record to the articulator.
- C. having the patient leave the dentures out of the mouth for 24 hours.
- D. remounting the dentures in the articulator using remount casts and new interocclusal records.

A decrease in the particle size of the amalgam alloy will affect the amalgam by

- A. increasing flow.
- B. decreasing expansion.
- C. retarding setting rate.
- D. increasing early strength.

Gold alloy can be given a white colour by introducing sufficient

- A. zinc.
- B. copper.
- C. cadmium.
- D. palladium.

Molecular attraction between unlike substances is called

- A. adhesion.
- B. cohesion.
- C. syneresis.
- D. absorption.

The modulus of elasticity of a material is determined by

- A. dividing stress by strain below elastic limit.
- B. dividing strain by stress.
- C. multiplying proportional limit by strain.
- D. squaring proportional limit and dividing by strain.

Distortion of a wax pattern is mainly due to

- A. insufficient plasticity during manipulation.
- B. insufficient bulk of material.
- C. relaxation of stresses introduced during manipulation.
- D. insufficient paraffin ingredient.
- E. refrigeration.

The greatest dimensional change in denture bases will occur

- A. after the dentures have been in the mouth 24 hours.
- B. when the dentures have been stored in tap water at room temperature.
- C. when a complete denture opposes natural teeth.
- D. at the time the dentures are removed from the flask.

Varying the mercury content of an amalgam results in which of the following?

- A. The higher the mercury content the greater the strength.
- B. The higher the mercury content the less the flow.
- C. The lower the mercury content the greater the flow.
- D. The lower the mercury content the greater the strength.

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Dental amalgam restorations

- A. show decreased flow when the tin mercury phase is increased.
- B. contain nickel to increase the yield strength.
- C. show decreased corrosion and marginal breakdown when the copper tin phase is increased.
- D. contain zinc to reduce galvanic corrosion.

Sclerotic dentin is

- A. soft.
- B. hypersensitive.
- C. resistant to caries.
- D. injurious to the pulp.

In placing an amalgam, interproximal wedging will be most effective in controlling the

- A. buccal contour.
- B. gingival contour.
- C. lingual contour.
- D. marginal ridge contour.

Widening of the periodontal space is NOT seen radiographically in

- A. trauma from occlusion.
- B. orthodontic tooth movement.
- C. scleroderma.
- D. Paget's disease.

The elastic limit of a material is the greatest load to which a material can be subjected to in order that it will

- A. fracture.
- B. remain distorted.
- C. return to its original dimension.
- D. return to a point beyond its original dimension.

On an edentulous patient, a panoramic radiograph is used to

- A. determine the level of muscle attachments.
- B. identify systemic problems affecting the soft tissues of the mouth.
- C. reveal retained roots or residual areas of infection.
- D. assess the vertical dimension.

Using less water for mixing plaster of Paris will result in set plaster that

- A. contracts.
- B. is stronger.
- C. is more porous.
- D. is less brittle.

Incomplete polymerization of composite resin will occur when the resin comes in contact with

- A. zinc phosphate cement.
- B. calcium hydroxide lining.
- C. zinc oxide eugenol base.
- D. glass-ionomer lining.
- E. polycarboxylate cement.

The Frankfort-horizontal is a reference plane constructed by joining which of the following landmarks?

- A. Porion and sella.
- B. Porion and nasion.
- C. Porion and orbitale.
- D. Nasion and sella.

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In dental radiography, the most effective method of reducing patient somatic exposure is to use

- A. a lead apron.
- B. high speed film.
- C. added filtration.
- D. collimation.

Which one of the following cements is anticariogenic because of fluoride ion release?

- A. Resin.
- B. Polycarboxylate.
- C. Zinc phosphate.
- D. Glass ionomer.

If the lining cement is left on the gingival cavosurface margin of a Class II amalgam restoration,

- A. cement dissolution will lead to leakage.
- B. the preparation will lack retention form.
- C. the preparation will lack resistance form to bulk fracture.
- D. the preparation will lack appropriate outline form.

The best way to increase the working time of a polyvinylsiloxane is to

- A. change the catalyst/base ratio.
- B. refrigerate the material.
- C. add oleic acid.
- D. reduce mixing time.

A centric relation record must be used to articulate casts in which of the following cases?

- A. More than one third of the patients occlusal contacts are to be restored.
- B. The vertical dimension of occlusion will be modified on the articulator.
- C. The patient shows signs of a temporomandibular disorder.
- D. The patient's centric occlusion and centric relation do not match.

In primary or secondary hyperparathyroidism, which of the following will NOT be found?

- A. Hyperplasia of the gingiva.
- B. Alteration of the trabecular bone pattern.
- C. Generalized loss of lamina dura.
- D. Giant cell tumours of bone.

On bite-wing radiographs, the normal alveolar crest on a young adult is

- A. at the cemento-enamel junction.
- B. 1-2mm apical to the cemento-enamel junction.
- C. 3-4mm apical to the cemento-enamel junction.

The surgical removal of tooth 3.6 requires anesthesia of the inferior alveolar nerve as well as which of the following nerves?

- A. Lingual, cervical plexus.
- B. Cervical, long buccal.
- C. Lingual, long buccal.
- D. Mental, long buccal.

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Which muscle is LEAST likely to dislodge a mandibular denture?

- A. Masseter.
- B. Buccinator.
- C. Mentalis.
- D. Mylohyoid.

Methemoglobinemia is a potential complication of an excessive dose of

- A. bupivacaine.
- B. lidocaine.
- C. mepivacaine.
- D. prilocaine.

Which impression material can be stored for more than 24 hours before being poured and still produce accurate dies?

- A. Polysulfide.
- B. Condensation reaction silicone.
- C. Reversible hydrocolloid.
- D. Polyvinylsiloxane.
- E. Irreversible hydrocolloid.

A 72 year old male patient complains of bone pain, fever and fatigue. Clinical examination shows petechiae on the skin and oral mucosa. The tongue has a nodular appearance. A craniofacial radiograph shows punched-out radiolucencies. The most likely diagnosis is

- A. Burkitt's lymphoma.
- B. chondrosarcoma.
- C. acute lymphocytic leukemia.
- D. multiple myeloma.

A 12 year old female patient has a developmental age of 8 years. Radiographic examination reveals mandibular dysplasia, delayed growth of the cranial vault and reduced facial height. Dental development is equivalent to 10 years. Panoramic radiographs reveal an abnormal tooth eruption pattern, crowding of the primary and permanent teeth, delayed eruption of the permanent canines and absence of the premolars. The most likely diagnosis is

- A. hypogonadism.
- B. hypoparathyroidism.
- C. hypothyroidism.
- D. hyposecretion of growth hormone.

A full coverage all-ceramic anterior crown requires

- A. a sloping shoulder (long bevel) margin.
- B. a minimum margin depth of 0.5mm lingually.
- C. rounded internal line angles.
- D. a minimum incisal reduction of 1.0mm.

A bitewing radiograph of an early mixed dentition should include the following proximal surfaces.

- A. Distal of the primary canine to distal of the permanent first molar.
- B. Distal of the primary canine to mesial of the permanent first molar.
- C. Mesial of the primary first molar to mesial of the permanent first molar.
- D. Mesial of the primary first molar to distal of the permanent first molar.

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When using a zinc phosphate cement to lute a full crown, it is recommended to

- A. mix the cement on a waxed paper pad.
- B. leave the tooth moist but not wet.
- C. apply continuous occlusal loading while the cement sets.
- D. remove any excess before the cement is set.

Doubling the diameter of a round stainless steel orthodontic wire decreases its springiness how many times?

- A. 4.
- B. 8.
- C. 12.
- D. 16.

The most common location of a lateral periodontal cyst is in the area of the

- A. maxillary incisors.
- B. maxillary molars.
- C. mandibular premolars.
- D. mandibular molars.

The inherited defect of teeth that may be associated with osteogenesis imperfecta is

- A. amelogenesis imperfecta.
- B. dentin dysplasia.
- C. dentinogenesis imperfecta.
- D. taurodontism.
- E. regional odontodysplasia.

When compared with admixed amalgams, spherical amalgams

- A. require less condensation pressure.
- B. require shorter trituration time.
- C. are stronger (24 hour compressive strength).
- D. have better resistance to marginal fracture.
- E. tarnish more.

The type of amalgam requiring the least volume of mercury for its setting reaction is

- A. low copper.
- B. high copper.
- C. admixed.
- D. lathe cut.
- E. spherical.

A ghost-like opaque image in a panoramic radiograph caused by a metal earring worn in the lobe of the left ear will be superimposed over the

- A. left mandibular ramus.
- B. right mandibular ramus.
- C. left posterior maxilla.
- D. right posterior maxilla.

During radiographic film processing, silver halide is removed from the emulsion during the

- A. developing stage.
- B. post-developing rinse stage.
- C. fixing stage.
- D. post-fixing wash stage.

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Which radiograph best depicts the buccal cortex of the mandible?

- A. Bite-wing.
- B. Periapical.
- C. Panoramic.
- D. Occlusal.

Which disorder presents with all permanent teeth exhibiting bulbous crowns, cervical constriction and obliterated pulp canals and chambers?

- A. Amelogenesis imperfecta.
- B. Dentinogenesis imperfecta.
- C. Dentin dysplasia type I.
- D. Dentin dysplasia type II.

Which of the following conditions is most likely to result in new periosteal bone formation?

- A. Fibrous dysplasia.
- B. Paget's disease of bone.
- C. Chronic osteomyelitis.
- D. Hyperparathyroidism.

For a mandibular denture impression, the muscle determining the form of the lingual flange in the molar region is

- A. mylohyoid.
- B. geniohyoid.
- C. medial pterygoid.
- D. lateral pterygoid.
- E. genioglossus.

The bond between porcelain and metal in a ceramometal (porcelain bonded to metal) crown is

- A. chemical.
- B. mechanical.
- C. equally chemical and mechanical.
- D. neither chemical nor mechanical.

In gingivitis, the sulcular epithelium has the following characteristics EXCEPT it

- A. is a barrier to bacterial invasion.
- B. is permeable to bacterial enzymes and toxins.
- C. may be ulcerated.
- D. undergoes both degenerative and proliferative changes.

A 5 year old child is diagnosed with leukocyte adherence deficiency and is also affected with generalized severe bone loss adjacent to his primary teeth. What is the diagnosis?

- A. Generalized aggressive periodontitis.
- B. Generalized chronic periodontitis.
- C. Gingival diseases modified by systemic factors.
- D. Periodontitis as a manifestation of systemic disease.

During the fabrication of a removable complete denture, block out and relief is placed on the

- A. diagnostic cast.
- B. master cast.
- C. refractory cast.
- D. remount cast.

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The most likely cause of postoperative sensitivity following the placement of a posterior composite resin restoration with ideal occlusion is

- A. excessive etching of enamel margins.
- B. inadequate peripheral seal.
- C. excessive primer resin.
- D. inadequate polymerization of primer resin.

A facebow record provides an approximation of the

- A. horizontal transverse axis and defines the position of the maxillary cast.
- B. horizontal transverse axis and defines the position of the mandibular cast.
- C. vertical axis and defines the position of the maxillary cast.
- D. vertical axis and defines the position of the mandibular cast.

When prescribing antibiotics for an orofacial infection in a healthy elderly patient, the usual adult dose and duration of the prescription should be written using the following guidelines. The dose is

- A. decreased by one half, duration unchanged.
- B. decreased by one third, duration unchanged.
- C. unchanged, duration unchanged.
- D. increased by one third, duration unchanged.
- E. unchanged, duration extended by one half.

In the formation of the tooth, Tome's processes are responsible for

- A. laying down the enamel prisms.
- B. forming the odontoblastic tubules.
- C. reorganizing the collagen fibres.
- D. generating the incremental lines.
- E. secreting the calcospherites.

Ceramics used in dentistry exhibit

- A. greater strength in tension than compression.
- B. a tendency for tensile fracture.
- C. chemical instability.
- D. high thermal coefficients of expansion.

Hardening of Type IV cast gold dental alloys by heat treatment increases

- A. ductility.
- B. yield strength.
- C. coring.
- D. elastic modulus.
- E. malleability.

An anterior bite plane will NOT result in

- A. decrease of the freeway space.
- B. increase of the freeway space.
- C. increase of the vertical dimension.
- D. extrusion of the posterior teeth.
- E. downward and backward mandibular rotation.

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In which of the following pathological conditions would a lower central incisor tooth be expected to respond to heat, cold and an electric pulp test?

- A. Chronic apical abscess (chronic periradicular abscess).
- B. Acute apical abscess (acute periradicular abscess).
- C. Periapical osseous dysplasia (periapical cemento-osseous dysplasia).
- D. Asymptomatic apical periodontitis (chronic periradicular periodontitis).

A patient that has been prescribed metronidazole should avoid

- A. alcohol.
- B. antacids.
- C. caffeine.
- D. cheese.
- E. grapefruit juice.

Which of the following medications can cause gingival enlargement?

- A. Diuretics.
- B. Beta blockers.
- C. Calcium channel blockers.
- D. Angiotensin converting enzyme inhibitors.

With respect to local anesthetic, which of the following will elicit the most rapid response in a patient?

- A. Too large a dose.
- B. Rapid absorption.
- C. Slow elimination.
- D. Intravascular injection.
- E. Slow biotransformation.

Which of the following is NOT suggestive of a diagnosis of necrotizing ulcerative gingivitis (NUG)?

- A. Bleeding from the gingiva.
- B. "Punched-out" papillae with necrotic slough.
- C. Bad breath.
- D. Metallic taste.
- E. Periodontal pocketing.

Clinically, the progression of periodontitis can be determined best by the increasing

- A. number of bleeding sites on probing.
- B. severity of gingival inflammation.
- C. depth of periodontal probing.
- D. clinical attachment loss.

The most likely diagnosis for a 5 year old patient with multiple well-defined multilocular radiolucencies of the maxilla and mandible is

- A. ameloblastic fibromas.
- B. ameloblastomas.
- C. cherubism.
- D. hyperthyroidism.
- E. hypophosphatasia.

A 4 year old child presents with a history of trauma and an asymptomatic discoloured primary maxillary left incisor. A periapical radiograph reveals no abnormalities. The most appropriate management is a/an

- A. regular recall for observation.
- B. pulpotomy.
- C. pulpectomy.
- D. extraction.

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An amalgam coronal-radicular core build-up for endodontically treated molar teeth requires

- A. an adequate pulp chamber and ferrule.
- B. a pulp chamber, ferrule and amalgam bonding.
- C. the presence of a post.
- D. the use of retentive threaded pins.

Which of the following statements is FALSE with respect to rounded internal line angles in preparations for Class II composite resins?

- A. Tooth structure is conserved.
- B. Stress concentration is reduced.
- C. Resistance form is compromised.
- D. Adaptation of the resin during placement is enhanced.

Which statement is true with respect to Class II composite resin preparations?

- A. Extension for prevention is a key element.
- B. Fissures are only included when carious.
- C. Including occlusal grooves makes the restoration more fracture-resistant compared to a slot preparation.
- D. The preparation has a “standard” shape for each individual tooth.

Lack of ramus height is caused by faulty development of

- A. membranous bone.
- B. endochondral bone.
- C. Meckel’s cartilage.
- D. the temporomandibular joint.

Failure of bone resorption over an erupting tooth is due to lack of

- A. fibroblasts.
- B. osteocytes.
- C. osteoclasts.
- D. neutrophils.

Ankylosis of primary teeth is most frequently observed in

- A. maxillary molars.
- B. mandibular molars.
- C. maxillary canines.
- D. mandibular incisors.

Which of the following has anticonvulsant properties?

- A. Acetaminophen.
- B. Codeine.
- C. Diazepam.
- D. Diphenhydramine.
- E. Nitrous oxide.

Excessively dark radiographs will result from

- A. underdevelopment.
- B. overexposure.
- C. backward placement of the film.
- D. too little milliamperage.

The term used to describe epithelial changes including nuclear hyperchromatism, alteration of nuclear/cytoplasmic ratio and abnormal mitoses is

- A. acanthosis.
- B. hyperparakeratosis.
- C. dysplasia.
- D. acantholysis.

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Which disorder is associated with hypercementosis of teeth?

- A. Paget's disease.
- B. Fibrous dysplasia.
- C. Cherubism.
- D. Hyperparathyroidism.

Trauma from occlusion may

- A. initiate marginal gingivitis.
- B. affect the blood supply to gingiva.
- C. initiate periodontitis.
- D. affect the progression of periodontitis.

The most accurate indicator of caries activity in root caries lesions is to

- A. assess the colour.
- B. evaluate the hardness.
- C. use bite-wing radiographs.
- D. apply caries detector dyes.

The residual mercury content of the amalgam restoration is significantly affected by

- A. cavity outline.
- B. amount of amalgam used.
- C. condensation technique.
- D. carving technique.

Which of the following should be performed to ensure a well-adapted and functional stainless steel crown?

- A. Prepare the tooth with sharp line angles.
- B. Break interproximal contacts using a tapered bur.
- C. Prepare a well-defined chamfer margin.
- D. Cement the crown with rubber dam in place.

Tell-show-do technique when used for behaviour management of pediatric patients

- A. works best for children under 3 years of age.
- B. involves using scientific dental terminology in all explanations.
- C. will decrease a child's fear of the unknown and their anticipation of pain.

Which of the following would require a custom incisal guide table for a patient with mutually protected occlusion?

- A. A fixed partial denture from tooth 3.5-3.7.
- B. An all ceramic crown on tooth 4.7.
- C. A fixed partial denture from tooth 1.1-1.3.
- D. A single ceramometal crown on tooth 1.4.

At the wax rim stage of jaw relation records for complete dentures, phonetic tests can be used to determine

- A. flange extension.
- B. protrusion.
- C. esthetics.
- D. centric relation.
- E. vertical dimension of occlusion.

Which of the following is a sign of local anesthetic overdose?

- A. Rash.
- B. Wheezing.
- C. Fainting.
- D. Convulsions.
- E. Swelling.

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Proper lip support for a maxillary complete denture is provided primarily by which of the following?

- A. Labial surface of the teeth and simulated gingiva.
- B. Thickness of the border in the vestibule.
- C. Festooned carvings on the labial surface of the simulated gingiva.
- D. Convex surface of the labial flange.

Which of the following will result from a 2 week regimen of tooth whitening using a 10% carbamide peroxide gel in a custom tray for 8 hours each night?

- A. Moderate demineralization of enamel.
- B. Significant incidence of irreversible pulpitis.
- C. Decreased bonding potential to enamel.
- D. Decreased enamel surface porosity.

Primary occlusal trauma can cause

- A. gingival recession.
- B. furcation involvement.
- C. horizontal bone loss.
- D. tooth sensitivity.

The normal position of the alveolar crest in healthy periodontium is

- A. 1 to 2mm coronal to the CEJ.
- B. at the CEJ.
- C. 1 to 2mm apical to the CEJ.
- D. 3 to 4mm apical to the CEJ.

A 10-15 second application of 37% phosphoric acid on prepared dentin will result in all of the following EXCEPT

- A. elimination of the smear layer.
- B. opening of the dentinal tubules.
- C. demineralization of the superficial dentin.
- D. elimination of the collagen fibres.

Increased tooth mobility and the absence of lamina dura are signs of

- A. hyperthyroidism.
- B. hyperpituitarism.
- C. hyperparathyroidism.
- D. scleroderma.

Which of the following has the potential for malignant transformation?

- A. Osteomalacia.
- B. Albright's syndrome.
- C. Paget's disease.
- D. Osteogenesis imperfecta.

A Class II amalgam preparation on a primary tooth does NOT require a gingival bevel because the enamel rods in the area incline

- A. gingivally.
- B. horizontally.
- C. occlusally.
- D. vertically.

A conical pontic replacing a mandibular first molar should be designed so that

- A. it seals the mucogingival fold.
- B. it has open gingival embrasures.
- C. the porcelain to metal junction is on its gingival surface.
- D. the gingival surface is concave buccolingually.

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The accuracy of alginate impression materials will be improved if

- A. the space between the tray and the teeth is 1-2mm.
- B. the space between the tray and the teeth allows 4-5mm of alginate.
- C. the impression is removed slowly from the undercuts around the teeth.
- D. the impression is immersed in disinfectant for one hour before pouring.

A reciprocal clasp arm on a removable partial denture will provide

- A. support.
- B. indirect retention.
- C. stabilization.
- D. direct retention.

What is the name of the process by which carbamide peroxide bleaches the teeth?

- A. Oxidation.
- B. Addition.
- C. Subtraction.
- D. Hydrogenation.

Which drug should be administered as the initial management for a patient with chest pain consistent with a myocardial infarction?

- A. Epinephrine.
- B. Atropine.
- C. Diphenhydramine.
- D. Lidocaine.
- E. Acetylsalicylic acid.

Which disorder presents with all permanent teeth exhibiting shortened roots, obliterated pulp canals, small crescent-shaped pulp chambers and apical radiolucencies?

- A. Amelogenesis imperfecta.
- B. Dentinogenesis imperfecta.
- C. Dentin dysplasia type I.
- D. Dentin dysplasia type II.

What statement related to self-threaded pins is FALSE?

- A. The ideal depth for the pin hole is 3mm.
- B. The pin does not increase fracture resistance of the restoration.
- C. The pin can increase retention of the restoration.
- D. The drill has a smaller diameter than the pin.

Which of the following dental materials is the most radiolucent?

- A. Porcelain.
- B. Gutta-percha.
- C. Acrylic.
- D. Zinc oxide.

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The proper placement of a lower universal extraction forceps for the removal of tooth 4.6 involves placing the beaks of the forceps

- A. as far apically on the tooth root as possible and applying apical pressure during luxation.
- B. on the lingual and buccal enamel of the crown and applying apical pressure during luxation.
- C. at the cemento-enamel junction of the tooth and gently pulling upward during luxation.
- D. as far apically on the tooth root as possible and gently pulling upward during luxation.
- E. at the cemento-enamel junction of the tooth and applying a rotational force during luxation.

The absence of lamina dura on a dental radiograph is suggestive of

- A. hyperparathyroidism.
- B. Paget's disease.
- C. hyperthyroidism.
- D. vitamin D deficiency.
- E. acromegaly.

In primary teeth, a pulpotomy using calcium hydroxide

- A. will cause an acute inflammatory reaction.
- B. is successful treatment in 90 percent of cases.
- C. will cause internal resorption.
- D. is the treatment of choice for small mechanical exposures.
- E. will stimulate apical closure.

A 7 year old child presents with a 3mm coronal fracture with pulp exposure of tooth 2.1 following a trauma 24 hours ago. The tooth is sensitive to hot and cold fluids. The most appropriate management is a

- A. MTA direct pulp capping.
- B. MTA pulpotomy.
- C. gutta-percha pulpectomy.
- D. gutta-percha pulpectomy followed by an apical surgery.
- E. MTA apexification.

Space closure is LEAST likely to occur following the loss of the deciduous

- A. mandibular canine.
- B. maxillary first molar.
- C. mandibular second molar.
- D. maxillary central incisor.

In the mixed dentition, an end-to-end first permanent molar relationship is indicative of

- A. normally developing occlusion.
- B. Angle Class II malocclusion.
- C. Angle Class III malocclusion.
- D. ideal molar occlusion.

Angle's classification of occlusion is based on

- A. a full complement of teeth.
- B. antero-posterior skeletal relationship of maxilla to mandible.
- C. antero-posterior relationship of maxillary and mandibular first permanent molars.
- D. vertical relationships in the lower face.

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Prior to the correction of a one tooth anterior crossbite, the principle factor to consider is the

- A. adequacy of mesio-distal space.
- B. developmental age of the patient.
- C. sequence of eruption of the permanent dentition.
- D. morphology of the anterior teeth.

The body of the mandible increases in length to accommodate the permanent second molar by

- A. apposition of bone in the condyle.
- B. resorption of bone along the anterior border of the ramus and apposition of bone on the posterior border of the ramus.
- C. apposition of bone on the alveolar margin and lower border of the body of the mandible.
- D. apposition of bone at the symphysis and posterior border of the ramus of the mandible.
- E. anterior growth.

The palate grows in length by

- A. endochondral growth.
- B. apposition on the free edge of the palatine bone.
- C. the downward and forward growth of the nasal septum.

Exclusive of third molars, the permanent dentition is usually completely erupted by the age of

- A. 9 to 11 years.
- B. 12 to 14 years.
- C. 15 to 17 years.
- D. 18 to 21 years.

The last primary tooth to be replaced by a permanent tooth is usually the

- A. maxillary canine.
- B. mandibular canine.
- C. maxillary first molar.
- D. mandibular second molar.

A 12 year old patient with a complete dentition has enamel hypoplasia of tooth 1.4. This condition was most likely caused by

- A. low calcium intake.
- B. high fluoride intake.
- C. an abscessed tooth 5.4.
- D. systemic tetracycline.
- E. a febrile illness.

Which of the following permanent restorations is the most appropriate after a formocresol pulpotomy has been completed on a primary molar?

- A. A stainless steel crown placed at the same appointment.
- B. A stainless steel crown placed when a radiograph demonstrates no internal resorption.
- C. An amalgam placed at the same appointment.
- D. An amalgam placed when a radiograph indicates no bone destruction between the roots.

During orthodontic therapy, the width of the periodontal ligament radiographically appears

- A. increased.
- B. decreased.
- C. unchanged.

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Which of the following materials are LEAST suitable for impressions for cast gold restorations?

- A. Polysulfides.
- B. Polyvinyl siloxanes.
- C. Polyethers.
- D. Irreversible hydrocolloids.

In metal-ceramic crowns, the bond between the materials is

- A. mainly mechanical.
- B. mainly chemical.
- C. decreased by oxides on the metal surface.
- D. decreased when the metal has a high yield point.

For application of porcelain to a ceramo-metal alloy, the correct viscosity is achieved by mixing the porcelain powder with

- A. a porcelain modifier.
- B. pure methyl alcohol.
- C. a mild detergent.
- D. distilled water.

Impression trays should be

- A. rigid.
- B. flexible enough to permit easy insertion.
- C. carefully polished on the interior.
- D. held in place by the patient.

A metal ceramic posterior fixed partial denture pontic should

- A. be constructed to have an occlusal surface one quarter the width of the tooth it replaces.
- B. be constructed to have an occlusal surface wider than the width of the tooth it replaces.
- C. cover as much mucosa as possible.
- D. provide adequate embrasure spaces.

In the processing of methyl methacrylate, denture porosity is most likely to appear in the

- A. thickest portion.
- B. thinnest portion.
- C. buccal surface.
- D. palatal area.

In processing (polymerizing) an acrylic denture in a water bath, a correct temperature control is desired because of the possibility of

- A. shrinkage of the denture.
- B. volumetric expansion of the denture causing an open bite.
- C. warpage.
- D. porosity due to boiling of the monomer.
- E. crazing of the denture base around the necks of the teeth.

The binder in casting investments not only strengthens the investment, but also

- A. creates a reducing atmosphere in the mold.
- B. tends to reduce both hygroscopic and thermal expansions.
- C. increases the thermal expansion of the mold.
- D. contributes to the overall expansion of the mold.

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A measure of the stiffness of a dental gold alloy is expressed as its

- A. proportional limit.
- B. modulus of elasticity.
- C. ultimate tensile strength.
- D. flow.

Repeated clasp adjustment can result in fracture due to

- A. strain hardening.
- B. increased ductility.
- C. increasing of the modulus of elasticity.
- D. lowering of the yield strength.

In treatment planning for a complete denture, severe undercuts on the edentulous ridge should be

- A. considered as retentive aids.
- B. removed surgically.
- C. retained but avoided by the denture base extension.
- D. removed if no cortical bone is involved.

Habitual thumbsucking that continues after the age of six commonly results in

- A. anterior open bite.
- B. skeletal malocclusion.
- C. mouth breathing.
- D. sinusitis.

Immediately after tooth extraction, a patient with a known cardiac problem experiences angina. This is most likely precipitated by

- A. the patient's upright position in the chair.
- B. an allergy to the anesthetic agent.
- C. anxiety and anticipation of pain.
- D. the epinephrine in the anesthetic agent.

A Kennedy Class II denture with no provision for indirect retention causes

- A. resorption of the supporting edentulous area.
- B. dislodgement of the saddle area during mastication.
- C. temporomandibular joint dysfunction.
- D. gingivitis.

In designing a removable partial denture, an effort is made to secure parallel tooth surfaces to act as

- A. guiding planes.
- B. occlusal rest areas.
- C. bracing areas.
- D. indirect retention.

In complete denture fabrication, the angulation of the horizontal condylar guidance plane of the articulator is determined by the

- A. cuspal inclination of the teeth selected.
- B. orientation of the occlusal plane.
- C. incisal guidance.
- D. centric relation interocclusal record.
- E. protrusive interocclusal record.

For a mandibular denture impression, the muscle determining the form of the lingual flange in the molar region is

- A. mylohyoid.
- B. geniohyoid.
- C. medial pterygoid.
- D. lateral pterygoid.
- E. superior pharyngeal constrictor.

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The most appropriate time to correct a cross-bite of the permanent maxillary central incisor is

- A. following eruption of the canines.
- B. following eruption of the central incisors.
- C. following eruption of the lateral incisors.
- D. during eruption of the central incisors.

For which of the following malocclusions is serial extraction most appropriate?

- A. Angle Class I.
- B. Angle Class II.
- C. Angle Class III.

A hardened gold alloy will exhibit

- A. less plastic deformation per unit of stress than the same alloy in a softened condition.
- B. greater plastic deformation per unit of stress than the same alloy in a softened condition.
- C. no difference in the plastic deformation per unit of stress of the alloy in hard or soft condition.

Mandibular overdentures are used to

- A. increase the strength of the denture.
- B. maintain the alveolar ridge morphology.
- C. improve periodontal health of abutment teeth.
- D. decrease costs.

Which of the following conditions is most appropriately treated upon diagnosis?

- A. A maxillary midline diastema.
- B. Posterior cross-bite with midline discrepancies.
- C. Improper axial inclination.
- D. End-to-end molar relationships.

The Frankel functional regulator appliance performs all of the following EXCEPT

- A. increasing vertical dimension.
- B. repositioning the mandible forward.
- C. retraction of the maxillary molars.
- D. expansion of the dental arches.

Cervical caries on the maxillary primary incisors in a 12-month old child is most likely caused by

- A. lack of systemic fluoride.
- B. poorly formed enamel.
- C. lack of calcium during pregnancy.
- D. excessive bottle use.

Idiopathic osteosclerosis is

- A. painful.
- B. found mostly in the maxilla.
- C. radiolucent.
- D. nonexpansile.

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In an edentulous patient, the coronoid process may

- A. limit the distal extension of the mandibular denture.
- B. affect the position and arrangement of the posterior teeth.
- C. determine the location of the posterior palatal seal.
- D. limit the distal extensions of the maxillary denture.

Using more water when mixing dental stone will result in a cast that exhibits

- A. increased expansion and decreased strength.
- B. decreased expansion and increased strength.
- C. decreased expansion and decreased strength.
- D. increased expansion and increased strength.

The most toxic form of mercury is

- A. organo mercurial compounds.
- B. inorganic mercuric compounds.
- C. inorganic mercurous compounds.
- D. elemental mercury.

The most radiosensitive cell type is a/an

- A. neuron.
- B. chondrocyte.
- C. myocyte.
- D. epithelial basal cell.

Zinc oxide eugenol cement is a/an

- A. phosphate cement.
- B. phenolic cement.
- C. resin modified glass ionomer cement.
- D. polyalkenoic acid cement.
- E. adhesive resin cement.

The use of an intra-coronal attachment is CONTRAINDICATED for a tooth

- A. that is nonvital.
- B. requiring a core procedure build up.
- C. supporting a partial denture.
- D. with short crown length.

Light-cured dental composites set when exposed to light. Light is the

- A. initiator.
- B. reactor.
- C. catalyst.
- D. activator.
- E. terminator.

The most appropriate management of a 4mm diameter carious exposure on a vital permanent first molar in a 7 year old is

- A. direct pulp capping.
- B. partial pulpotomy.
- C. pulpectomy.
- D. extraction.

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Which of the following does NOT affect probing depth measurement?

- A. Probing force.
- B. Diameter of the probe tip.
- C. Angulation of the probe.
- D. Subgingival calculus.
- E. Position of the mucogingival junction.

Which of the following is the most appropriate treatment for an endodontically treated mandibular first molar with a previously placed MOD amalgam restoration?

- A. Bonded amalgam restoration.
- B. Composite resin restoration.
- C. Ceramic inlay.
- D. Crown.

Which of the following conditions is NOT associated with the fully edentulous state?

- A. Residual ridge reduction.
- B. Decrease in masticatory function.
- C. Altered taste perception.
- D. Rheumatoid arthritis.

Which of the following is NOT considered a risk factor for periodontal disease?

- A. Diabetes.
- B. Genetics.
- C. Heart disease.
- D. Tobacco use.

The most common risk associated with vital bleaching using 10% carbamide peroxide in a custom tray is

- A. superficial enamel demineralization.
- B. soft tissue reaction.
- C. tooth sensitivity.
- D. cytotoxicity.

The primary function of gingival retraction cord is to

- A. ensure adequate impression material in the sulcus.
- B. displace the epithelial attachment.
- C. control the salivary flow.
- D. eliminate the intrasulcular debris.

Strain hardening a metal will reduce its

- A. modulus of elasticity.
- B. ductility.
- C. proportional limit.
- D. yield strength.

The chemical that is used to retard the setting reaction in alginate impression materials is

- A. calcium sulfate.
- B. sodium sulfate.
- C. calcium phosphate.
- D. sodium phosphate.

When gypsum is mixed with water and sets to form a dental cast, the powder particles are replaced by crystals of

- A. potassium sulfate.
- B. potassium phosphate.
- C. calcium sulfate.
- D. trisodium phosphate.

The most common clinical characteristic of a functional crossbite is

- A. midline deviation.
- B. arch asymmetry.
- C. pain on closure.
- D. severe crowding.

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The primary function of root canal sealer is to

- A. prevent discolouration of the tooth.
- B. stimulate healing in the apical region.
- C. medicate the canal to eliminate remaining bacteria.
- D. fill space between gutta-percha and pulp canal wall.

Orthodontic headgear can be used for all of the following EXCEPT

- A. anchorage augmentation.
- B. molar distalization.
- C. maxillary skeletal expansion.
- D. growth modification.

Which tooth movement is NOT possible with a removable appliance?

- A. Crown tipping.
- B. Root uprighting.
- C. Crown rotation.

The last bone in the craniofacial complex to stop growing is the

- A. frontal bone.
- B. nasal bone.
- C. maxilla.
- D. mandible.

An advantage of a metal-ceramic crown over an all-ceramic crown is

- A. superior esthetics.
- B. more conservative vestibular preparation.
- C. increased restoration strength.
- D. superior translucency.

The pulpal floor of an occlusal amalgam preparation on a mandibular first premolar should slope apically from

- A. mesial to distal.
- B. buccal to lingual.
- C. distal to mesial.
- D. lingual to buccal.

Fremitus is

- A. tooth mobility of grade II.
- B. mobility during occlusion.
- C. vertical tooth mobility.
- D. tooth pain upon percussion.

Compared to nonsmokers, cigarette smokers are more likely to have

- A. less bone loss.
- B. less gingival recession.
- C. more bleeding on probing.
- D. more attachment loss.

Papillary hyperplasia under a denture is usually due to

- A. a candida infection.
- B. an ill fitting denture.
- C. failure to remove the denture at night.
- D. an allergy to the denture material.

Calcification of the permanent first molars normally begins at

- A. 6 months in utero.
- B. birth.
- C. 6 months.
- D. 12 months.

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What is the most likely cause of food impaction at the site of a recently placed Class II composite resin restoration?

- A. Inadequate proximal contact.
- B. Gingival overhang.
- C. Inadequate marginal ridge morphology.
- D. Poor oral hygiene.

The occlusal cavosurface margin for a Class I amalgam restoration should be

- A. beveled.
- B. 90°.
- C. chamfered.
- D. acute.

The technique of amalgam bonding can be

- A. used as the primary means of retaining an amalgam restoration.
- B. relied upon to reinforce severely weakened cusps.
- C. effective in providing an improved initial seal.
- D. used in conjunction with copal varnish.

Which of the following statements is correct with respect to zinc containing amalgams?

- A. High copper amalgam restorations containing zinc demonstrate better overall survival rates.
- B. Amalgams containing zinc should be used when contamination with moisture is unavoidable during condensation.
- C. Zinc is added during the manufacturing operation to increase the solubility of tin in silver.
- D. Amalgams containing zinc produce a significantly better seal than zinc-free amalgams.

A major difference between stable angina pectoris and myocardial infarction is that stable angina pectoris does NOT involve

- A. crushing substernal pain.
- B. ischemic myocardial necrosis.
- C. occlusive coronary artery disease.
- D. atherosclerosis.
- E. females under the age of 80 years.

Which of the following tissues is LEAST sensitive to ionizing radiation?

- A. Enamel.
- B. Oral mucosa.
- C. Salivary gland.
- D. Bone.

Hypoglycemia in the conscious patient is most appropriately managed with

- A. oxygen.
- B. epinephrine.
- C. carbohydrates.
- D. glucagon.
- E. insulin.

What is the most effective local anesthetic technique for a patient with trismus who requires a pulpectomy on a mandibular molar?

- A. Mental nerve block.
- B. Gow-Gates block.
- C. Vazirani-Akinosi block.
- D. Inferior alveolar nerve block.
- E. Buccal nerve block.

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Which of the following does NOT block cyclooxygenase-2?

- A. Acetaminophen.
- B. Acetylsalicylic acid.
- C. Celecoxib.
- D. Diflunisal.
- E. Ibuprofen.

When using alginate impression material, which one of the following statements is correct?

- A. Store the impression in water at 37°C prior to pouring the cast.
- B. Remove the impression slowly from the undercuts.
- C. Control the setting time by changing the water/powder ratio.
- D. Pour the cast immediately following disinfection.

What is the most likely cause of long term clinical failure for a metal-ceramic crown with porcelain occlusal coverage on a molar?

- A. Recurrent caries.
- B. Cohesive porcelain fracture.
- C. Adhesive porcelain fracture.
- D. Loss of retention.

Which is the most appropriate treatment for a patient who reports persistent thermal sensitivity 4 weeks after placement of a posterior composite resin restoration with acceptable occlusion?

- A. Adjust the restoration slightly out of occlusion.
- B. Replace the restoration with a reinforced zinc oxide eugenol restoration.
- C. Replace the restoration with a bonded amalgam restoration.
- D. Replace the restoration with a bonded composite resin restoration.

The volumetric polymerization shrinkage of a hybrid composite resin is in the order of

- A. 0%.
- B. 0.1 – 1.0%.
- C. 2 – 8%.
- D. 10 – 15%.

During matrix band removal, the risk of marginal ridge fracture of an amalgam restoration is reduced by

- A. completing most of the shaping of the marginal ridge before removal.
- B. leaving an excess of amalgam in the occlusal area before removal.
- C. contouring and wedging the band.
- D. using universal circumferential retainers and bands.

A dry and crumbly mix of amalgam can be the result of

- A. under trituration.
- B. over trituration.
- C. high copper content.
- D. lack of zinc content.

Which of the following is NOT a consequence of vital bleaching with 10% carbamide peroxide?

- A. Reversible tooth sensitivity.
- B. Soft tissue sloughing.
- C. Sore throat.
- D. Weakening of the enamel.

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What is the name of the area in which the resin of the adhesive system micromechanically interlocks with dentinal collagen?

- A. Active zone.
- B. Smear layer.
- C. Hybrid layer.
- D. Adhesive zone.

Which of the following procedures will increase the retention of a Class III composite resin restoration in primary incisor and canine teeth?

- A. Keeping the preparation as small as possible.
- B. Using labial or lingual dovetails.
- C. Etching the preparation for an additional 30 seconds.

A 2½ year old child has intruded maxillary central incisors which are not in proximity to the permanent successors. What is the most appropriate management?

- A. Reposition the teeth and splint.
- B. Reposition the teeth and do not splint.
- C. Monitor the teeth for re-eruption.
- D. Extract the teeth.

A child has received an inferior alveolar nerve block using 1.5ml of lidocaine 2% with 1:100,000 epinephrine and shows signs that the block was effective. However, during placement of a rubber dam clamp on the permanent first molar, the child complains that the “tooth ring” is hurting. Which of the following is the most appropriate management?

- A. Wait 15 minutes until more profound anesthesia is achieved.
- B. Anesthetize the lingual nerve with the remaining lidocaine.
- C. Anesthetize the long buccal nerve with the remaining lidocaine.
- D. Proceed with treatment without rubber dam.

A patient has a prosthetic heart valve and is allergic to penicillin. The most appropriate antibiotic to be used prophylactically is

- A. erythromycin.
- B. metronidazole.
- C. amoxicillin.
- D. tetracycline.
- E. clindamycin.

Which of the following is NOT associated with the administration of acetylsalicylic acid?

- A. Tinnitus.
- B. Analgesia.
- C. Antipyresis.
- D. Constipation.
- E. Inhibition of prostaglandin synthesis.

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Which of the following is NOT a function of the wedge in the restoration of a Class II cavity with amalgam?

- A. It separates the teeth to allow restoration of the contact.
- B. It assists in the adaptation of the matrix band to the proximal portion of the preparation.
- C. It absorbs moisture from the cavity preparation, allowing the restoration to be placed in a dry field.
- D. It provides stability to the matrix band and retainer assembly.

What is the most likely cause of voids in a maxillary diagnostic cast?

- A. Poor mix of the impression material, incorporating air into the material.
- B. Formation of saliva droplets on the palate while the impression is setting.
- C. Poor mix of the stone.
- D. Too high a water:powder ratio of the stone.
- E. Poor flow of the impression material.

Which of the following is the most appropriate management for a dry socket?

- A. Hydrogen peroxide irrigation of the socket.
- B. Vigorous curettage of the socket.
- C. Placement of a dressing in the socket.
- D. A prescription for antibiotics.

At what age is a child expected to have 12 erupted primary teeth and 12 erupted permanent teeth?

- A. 4½ years.
- B. 6½ years.
- C. 8½ years.
- D. 11½ years.

What is the most probable complication of a local anesthetic injection into the parotid gland?

- A. Infection.
- B. Trismus.
- C. Diplopia.
- D. Facial paralysis.

Which of the following is LEAST likely to cause swelling of the gingiva adjacent to an endodontically treated tooth?

- A. Internal root resorption.
- B. Vertical root fracture.
- C. Periradicular abscess.
- D. Periodontal abscess.

Which class of drugs should first be considered for oral sedation in the adult patient?

- A. Antihistamines.
- B. Barbiturates.
- C. Benzodiazepines.
- D. Opioids.
- E. Phenothiazines.

A 10 year old child with no previous caries experience has proximal carious lesions in the enamel only of several primary molars. How should the lesions be managed?

- A. No treatment.
- B. Be treated with topical fluoride, proper home care and observation.
- C. Be smoothed with abrasive strips.
- D. Be treated with fissure sealants.
- E. Be restored with composite resin.

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In a restoration following endodontic therapy, the primary function of the post is to improve

- A. distribution of forces along the long axis.
- B. resistance of the tooth to fracture.
- C. sealing of the root canal.
- D. retention of the definitive restoration.

For a complete denture patient, which letter or sound is a guide for the position of the incisal edge of the maxillary incisors?

- A. M.
- B. S.
- C. F.
- D. P.
- E. J.

Which porcelain stain colour is added to give the appearance of translucency?

- A. Grey.
- B. Blue.
- C. Yellow.
- D. White.
- E. Orange.

A new bone grafting material has been demonstrated to generate bone tissue through the recruitment of progenitor cells. This potential can best be described as an example of

- A. osteoconduction.
- B. osteogenesis.
- C. osteoinduction.
- D. osteopenia.

Dentist supervised at-home bleaching technique is NOT indicated for a patient who

- A. is unhappy with the natural colour of their teeth.
- B. has existing all-ceramic crowns that are lighter than the natural teeth.
- C. has a single dark coloured tooth.
- D. has teeth discoloured by tetracycline.
- E. has extrinsic stains.

The most appropriate radiographic examination for a new patient with an extensively restored dentition and generalized periodontal disease is (a)

- A. full mouth periapicals.
- B. full mouth periapicals and bitewings.
- C. panoramic radiograph.
- D. panoramic radiograph and bitewings.
- E. cone beam computed tomography.

The most appropriate management of a noncavitated, smooth surface carious lesion is

- A. placing an amalgam restoration.
- B. placing a composite restoration.
- C. applying topical fluoride.
- D. prescribing a chlorhexidine rinse.
- E. observation.

A patient complains of intermittent spontaneous pain in a tooth that was previously treated with a direct pulp cap. The tooth is not sensitive to percussion. Both hot and cold produce severe pain. The most likely diagnosis is

- A. reversible pulpitis.
- B. symptomatic irreversible pulpitis.
- C. cracked tooth syndrome.
- D. symptomatic apical periodontitis (acute periradicular periodontitis).

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An occlusal rest should be prepared so that

- A. occlusal forces are directed perpendicular to the long axis of the tooth.
- B. occlusal forces are directed parallel to the long axis of the tooth.
- C. occlusal forces are concentrated near the marginal ridge.
- D. the tooth is prevented from rotating.

The problem most likely to result from a temporary crown with inadequate proximal contacts is

- A. frequent decementation of the temporary crown.
- B. gingival recession.
- C. difficulty in seating the permanent crown.
- D. an esthetically compromised restoration.

Which of the following drug groups is LEAST likely to cause xerostomia?

- A. Diuretics.
- B. Antibiotics.
- C. Antidepressants.
- D. Anticholinergics.

A patient on anticoagulant drugs who requires an extraction has a prothrombin time of 20 seconds. The normal value is 15 seconds. The most appropriate management is to

- A. administer vitamin K after the extraction.
- B. administer vitamin K before the extraction.
- C. extract the tooth and use local measures to control bleeding.
- D. discontinue anticoagulation drugs one week before extraction.

Opioids would be CONTRAINDICATED for the management of

- A. pain.
- B. severe cough.
- C. diarrhea.
- D. depression.

In the restoration of an endodontically treated tooth, increasing the post preparation diameter will most likely increase

- A. post stability.
- B. cervical resistance.
- C. stress to the root.
- D. crown retention.

In composite resin restorations, glass ionomer cements can be used as a base because they are

- A. sedative to a hyperemic pulp.
- B. neutral in colour.
- C. biocompatible.
- D. compatible with the expansion of composite resins.

If a complete occlusal adjustment is necessary, interferences should be corrected

- A. after all restorative procedures are completed.
- B. after each restorative procedure.
- C. before starting any restorative treatment.
- D. during treatment.

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Which of the following modifications to the standard procedure for mixing gypsum products will increase the compressive strength of the set material?

- A. Adding a small amount of salt to the water before mixing.
- B. Decreasing the water/powder ratio by a small amount.
- C. Using warmer water.
- D. Decreasing the mixing time.

When preparing a posterior tooth for an extensive amalgam restoration, a retentive pin hole preparation should be placed

- A. perpendicular to the pulpal floor.
- B. parallel to the contour of the final restoration.
- C. angled 30° away from the pulp chamber.
- D. parallel to the external root contour.

What is the most likely cause of the interdental papilla protruding from beneath the rubber dam after placement?

- A. The holes were placed too far apart.
- B. A light weight dam was used.
- C. The holes were placed too close together.
- D. The teeth were not individually ligated.

The most common primary tooth to become ankylosed is a

- A. maxillary molar.
- B. mandibular molar.
- C. maxillary canine.
- D. mandibular canine.

Immediately following a posterior superior alveolar block injection, the patient's face becomes quickly and visibly swollen. The immediate treatment should be to

- A. use pressure followed by cold packs over the swelling.
- B. use hot packs over the swelling.
- C. refer the patient to a hospital.
- D. administer 100mg hydrocortisone intravenously.
- E. administer diphenhydramine hydrochloride (Benadryl) 50mg intravenously.

Systemic or topical cortisone therapy is used in the treatment of

- A. necrotizing ulcerative gingivitis.
- B. erythema multiforme.
- C. submaxillary cellulitis.
- D. ptyalism.
- E. herpes simplex.

The most typical location for the development of early childhood caries is the

- A. incisal edges of the mandibular incisors.
- B. incisal edges of the maxillary incisors.
- C. gingival area of the mandibular incisors.
- D. gingival area of the maxillary incisors.

A 10 year old patient complains of discomfort in a maxillary primary second molar when eating. The tooth is mobile with a large mesio-occlusal amalgam restoration. The most likely diagnosis is

- A. an exfoliating tooth.
- B. a hyperemic pulp.
- C. a hyperplastic pulp.
- D. an acute pulpitis.
- E. traumatic occlusion.

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The extraction of a maxillary primary central incisor at the age of 6 years will cause

- A. loss of intercanine space.
- B. increased intercanine space.
- C. no change in intercanine space.
- D. increased overbite.
- E. decreased overjet.

To maintain pulp health and vitality, the preferred treatment for asymptomatic teeth with very deep dentinal caries is

- A. direct pulp capping using a dentin bonding agent.
- B. to avoid pulp exposure and use indirect pulp capping.
- C. direct pulp capping using calcium hydroxide.
- D. to remove all affected dentin.

The most common cause of persistent post-operative sensitivity following the placement of posterior composite resin restorations is

- A. hyperocclusion.
- B. microleakage.
- C. acidic primers.
- D. residual caries.

Which antibiotic is CONTRAINDICATED for a patient with a history of a Type 1 anaphylactic reaction to penicillin?

- A. Azithromycin.
- B. Cephalexin.
- C. Clindamycin.
- D. Erythromycin.

A circumscribed radiolucent lesion associated with a retained root tip should be curetted because

- A. pus in the lesion will infect the blood clot.
- B. the fibrous tissue of the lesion will prevent new bone formation.
- C. the capillaries of the lesion will cause prolonged bleeding.
- D. the lesion may undergo cystic degeneration.

Space closure is LEAST likely to occur following the premature loss of the primary

- A. maxillary second molar.
- B. mandibular second molar.
- C. maxillary first molar.
- D. mandibular canine.
- E. maxillary central incisor.

An early radiographic sign of chronic periodontitis is

- A. widening of vascular canals.
- B. "notching" of the crestal lamina dura.
- C. enlargement of the interdental medullary spaces.
- D. decreased radiolucency of the interdental trabeculae.

In radiology, if target-skin distance is doubled, the exposure time must be

- A. doubled.
- B. tripled.
- C. quadrupled.
- D. increased 10 times.

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Decreased size or obliteration of pulp chambers and canals is diagnostic of

- A. Hand-Schuller-Christian disease.
- B. cleidocranial dysplasia.
- C. amelogenesis imperfecta.
- D. osteogenesis imperfecta.

Which of the following tissues is the LEAST sensitive to the effects of x-radiation?

- A. Hematopoietic.
- B. Gonadal.
- C. Bone.
- D. Glandular.

A patient who is 4 months pregnant requires an extraction. A radiograph may

- A. be taken only if difficulty is encountered during surgery.
- B. be taken.
- C. not be taken.
- D. be taken by panoramic radiography only.

A 17 year old male patient exhibits delayed eruption of permanent teeth. Radiographs indicate multiple, impacted permanent teeth. The patient's head size is large with prominent frontal eminences and slightly constricted facial features. The most likely diagnosis is

- A. osteopetrosis.
- B. osteitis deformans.
- C. Gardner's syndrome.
- D. acromegaly.
- E. cleidocranial dysplasia.

What is the most appropriate location for the placement of a retentive pin?

- A. At the dentino-enamel junction.
- B. In dentin a minimum 0.5mm from the dentino-enamel junction.
- C. In enamel a minimum 0.5mm from the dentino-enamel junction.
- D. At least 2.5mm from the cavosurface margin.

To obtain block anesthesia of the second division of the trigeminal nerve, the solution must be deposited in proximity to the

- A. foramen ovale.
- B. pterygoid plexus.
- C. foramen spinosum.
- D. infraorbital foramen.
- E. pterygopalatine fossa.

What is the goal of dentin conditioning?

- A. Remove the smear layer.
- B. Reduce the dentinal fluids in the tubules.
- C. Expose the hydroxyapatite.
- D. Eliminate the collagen fibrils.

A 3 year old, 16kg child is given 2 cartridges of 4% prilocaine with 1:200,000 epinephrine for extraction of primary teeth. After a few minutes the child becomes lethargic, disorientated and eventually begins to convulse. The most probable cause of this reaction is

- A. epinephrine.
- B. allergic reaction to the local anesthetic.
- C. overdose of local anesthetic.
- D. epilepsy precipitated by epinephrine.

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During preparation of a subgingival Class V on tooth 3.6, a patient suddenly develops a swelling of the left face and neck with crepitation. The most probable diagnosis is a/an

- A. anaphylactoid reaction.
- B. hematoma.
- C. cervicofacial emphysema.
- D. type 1 allergic reaction.

The outline form for a Class I amalgam preparation is determined by all of the following EXCEPT the

- A. extent to which the enamel has been involved by the carious process.
- B. lateral spread of caries along the dentino-enamel junction.
- C. extension that must be made along the fissures in order to achieve sound and smooth margins.
- D. need to terminate the margins on a cusp ridge or marginal ridge crest.
- E. extent of undermining of the enamel by the carious process.

When removing bone or sectioning roots of teeth with a high-speed handpiece, the air/water combination should be set with

- A. air and water on.
- B. water only.
- C. air only.
- D. neither air nor water.

On a semi-adjustable articulator, the incisal guidance is the mechanical analogue of

- A. horizontal guidance.
- B. the curve of Monson.
- C. the curve of Spee.
- D. horizontal and vertical overlap.

Assuming a maxillary cast is accurately mounted on an articulator, a centric relation record is used to

- A. determine the vertical dimension of occlusion.
- B. mount the mandibular cast.
- C. establish the occlusal plane.
- D. record the inclination of the condylar guidance.

Which of the following teeth is the LEAST desirable to use as an abutment tooth for a fixed partial denture?

- A. Tooth with pulpal involvement.
- B. Tooth with minimal coronal structure.
- C. Tooth rotated and tipped out of line.
- D. Tooth with short, tapered root and a long clinical crown.

The extraction of a primary maxillary central incisor at the age of 6 years will cause

- A. loss of intercanine space.
- B. increased intercanine space.
- C. no change in intercanine space.
- D. decreased overjet.

Following a simple extraction of tooth 4.7, hemostasis was achieved. Four hours later, there is renewed bleeding from the extraction site. The most appropriate initial management is to

- A. administer local anesthetic with epinephrine and suture.
- B. apply firm pressure for ten minutes.
- C. obtain an INR and complete blood count.
- D. apply dry socket dressing.

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Which of the following instruments is CONTRAINDICATED when extracting primary teeth?

- A. Rongeur.
- B. Root tip elevator.
- C. Cow horn forceps.
- D. Maxillary universal forceps.

Which of the following teeth are most often lost as a result of periodontitis?

- A. Mandibular molars.
- B. Maxillary molars.
- C. Mandibular incisors.
- D. Maxillary incisors.

Mesiolingual rotation of permanent first maxillary molars

- A. increases arch length.
- B. results in an Angle Class II molar relationship.
- C. causes impaction of the second permanent molars.

Which of the following drugs is most likely to induce photosensitivity?

- A. Tetracycline.
- B. Metronidazole.
- C. Acetaminophen.
- D. Oxycodone.

Which of the following medications can be taken by a patient who has been prescribed lithium?

- A. Acetaminophen.
- B. Flurbiprofen.
- C. Ibuprofen.
- D. Naproxen.

When the gingival margin of a Class II composite resin preparation is located less than 1mm occlusal to the cemento-enamel junction, the risk of marginal leakage is reduced by

- A. incremental curing.
- B. placing a glass ionomer liner.
- C. placing an initial increment of flowable resin.
- D. beveling the gingival margin.

Anginal pain is

- A. provoked by exercise or cold weather.
- B. not relieved by rest.
- C. relieved by digoxin.
- D. aggravated by deep inspiration.

A healthy 66 year old patient who had a myocardial infarct eight years ago requires an extraction. The most appropriate management is to

- A. admit the patient to hospital for extraction with local anesthesia.
- B. admit the patient to hospital for extraction with general anesthesia.
- C. extract the tooth in the office using preoperative sedation and local anesthetic without a vasoconstrictor.
- D. treat the patient in the office as a normal patient.

For complete dentures, the most important factor affecting speech is the

- A. reproduction of the palatal rugae.
- B. position of the molar teeth.
- C. position of the anterior teeth.
- D. palatal thickness.

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A rubber dam in which there is leakage interproximally most likely has

- A. holes punched too far apart.
- B. holes punched too close together.
- C. too broad a rubber dam arch form.
- D. too much tension on the rubber dam holder.

The most appropriate treatment for an endodontically treated molar with an existing MOD restoration is a

- A. cast gold inlay.
- B. bonded composite resin.
- C. bonded silver amalgam.
- D. cast restoration with cuspal coverage.

The pulpal floor of an occlusal amalgam preparation on a mandibular first premolar should

- A. be 2mm into the dentin.
- B. slope apically from mesial to distal.
- C. be parallel to the buccolingual cusp plane.
- D. be perpendicular to the long axis of the tooth.

Increased radiographic density is caused by

- A. decreased mA.
- B. decreased kVp.
- C. decreased target-object distance.
- D. increased object-film distance.

The genial tubercles are best visualized on which type of radiograph?

- A. Occlusal.
- B. Periapical.
- C. Bitewing.
- D. Panoramic.

What is the most likely cause of sensitivity related to a noncarious cervical lesion?

- A. Loss of dentin bulk.
- B. Increased number of open dentinal tubules.
- C. Bacterial contamination.
- D. Hyperocclusion.

An immediate toxic reaction to a local anesthetic administration is caused by a/an

- A. deterioration of the anesthetic agent.
- B. hypersensitivity to the vasoconstrictor.
- C. hypersensitivity to the anesthetic agent.
- D. excessive blood level of the anesthetic agent.

A preparation for a Class II amalgam restoration in primary molars should include

- A. occlusally divergent buccal and lingual walls.
- B. an axial wall that parallels the dentino-enamel junction.
- C. an isthmus that occupies two thirds of the intercuspal distance.
- D. undercut enamel and dentin.

The most radiosensitive salivary gland is the

- A. sublingual.
- B. submandibular.
- C. parotid.

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Radiographic examination of a 9 year old patient reveals the pre-eruptive position of a mandibular second premolar is tipped 20 degrees from vertical. The primary second molar exhibits no root resorption. The most appropriate management is to

- A. surgically upright the premolar.
- B. remove the primary second molar and place a space maintainer.
- C. recall the patient for reassessment in 6 months.

During cardiopulmonary resuscitation (CPR), external chest compression of an adult patient should be

- A. 1 - 2cm.
- B. 4 - 5cm.
- C. 7 - 10cm.
- D. 10 - 20cm.

Which of the following outcomes may be the result of probing a healthy periodontium with excessive force?

- A. Underestimation of attachment loss.
- B. Bleeding on probing.
- C. Angular bony defect.
- D. Gingival recession.

An apprehensive 77 year old patient, weighing approximately 60kg, requires the removal of several mandibular teeth under local anesthesia. The most appropriate method to manage this patient's anxiety is to administer

- A. 20mg of diazepam, intravenously.
- B. 20mg of diazepam, orally.
- C. 100mg of secobarbital, orally.
- D. nitrous oxide and oxygen.

The level of *streptococcus mutans* has been shown to be significantly higher in the bacterial plaque adjacent to which type of posterior restoration?

- A. Glass-ionomer.
- B. Composite resin.
- C. Amalgam.
- D. Gold castings.

Which of the following conditions should NOT commonly be treated during the mixed dentition stage?

- A. Anterior crossbite.
- B. Posterior crossbite.
- C. Maxillary incisor rotation.
- D. Class II molar relationship.

Areas of isolated gingival recession are most frequently seen on teeth that are

- A. nonvital.
- B. moderately mobile.
- C. ankylosed.
- D. labially prominent in the arch.

A clinical finding common to alcoholism, poorly-controlled diabetes mellitus, uremia and liver disease is

- A. a smooth tongue.
- B. increased blood pressure.
- C. a coated tongue.
- D. labial fissures.
- E. halitosis.

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The most appropriate treatment for a unicystic ameloblastoma is

- A. root canal therapy.
- B. hemi-mandibulectomy.
- C. block resection.
- D. curettage.
- E. radiotherapy.

Coxibs are more appropriate than standard NSAIDs for patients with a history of

- A. renal dysfunction.
- B. asthma.
- C. gastrointestinal bleeding.
- D. cardiac problems.

Which of the following is the most potent analgesic?

- A. Acetylsalicylic acid 650mg.
- B. Ibuprofen 600mg.
- C. Acetaminophen 300mg with codeine 30mg.
- D. Codeine 60mg.

What is the most appropriate reason to delay the extraction of a mandibular third molar with acute pericoronitis?

- A. Risk of osteomyelitis.
- B. Risk of trismus.
- C. Difficulty achieving anesthesia.
- D. Risk of spread of infection.

A 27 year old woman complains of burning mouth, fatigue, palpitations and lack of energy. An oral exam shows angular cheilitis and atrophic glossitis. What is the most likely diagnosis?

- A. Iron deficiency anemia.
- B. Crohn's disease.
- C. Chronic lymphocytic leukemia.
- D. Vitamin B deficiency.

Solitary eosinophilic granuloma is associated with

- A. multiple myeloma.
- B. hyperparathyroidism.
- C. hypoparathyroidism.
- D. Langerhans cell histiocytosis.

The main purpose of collimation of an x-ray beam is to

- A. permit the use of lower kilovoltage during exposure.
- B. filter out useless short rays.
- C. permit use of the long cone technique.
- D. reduce the diameter of the primary beam.
- E. reduce exposure time.

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A nonsurgical endodontic treatment was completed on tooth 1.6 six months ago. The temporary restoration was lost two months ago. The tooth has no caries or fractures. All cusps are present but are weak and unsupported. What is the most appropriate management prior to placing a full gold crown?

- A. Placing a bonded composite resin restoration to seal the access.
- B. Post placement in the palatal canal followed by a core build-up.
- C. Removal of 4-5mm of coronal gutta-percha from all canals followed by a core build-up.
- D. Endodontic retreatment followed by a core build-up.

Overadjustment of a wrought wire denture clasp can lead to fracture because of a/an

- A. increase in modulus of elasticity.
- B. decrease in ductility due to strain hardening.
- C. decrease in the yield strength.
- D. increase in fracture toughness.

Which of the following is the most important determinant for the maximum length of a post in an endodontically treated tooth?

- A. Distance between the crestal bone and root apex.
- B. Crown/root ratio.
- C. Maintenance of an apical gutta-percha seal.

Pulp vitality tests are used to differentiate between

- A. periapical osseous dysplasia (periapical cemento-osseous dysplasia) and a periapical granuloma.
- B. periapical osseous dysplasia (periapical cemento-osseous dysplasia) and an incisive canal cyst.
- C. periapical granuloma and a periapical cyst.
- D. periapical granuloma and a periapical abscess.

Fordyce spots or granules is/are

- A. sweat glands.
- B. implanted epithelium.
- C. cystic formations.
- D. sebaceous glands.
- E. hyperkeratosis.

Exfoliative cytology can be of value in the diagnosis of

- A. lichen planus.
- B. aphthous ulceration.
- C. herpes simplex.
- D. erythema multiforme.
- E. benign mucous membrane pemphigoid.

A patient has an asymptomatic, adherent, white patch on the oral mucosa. Which of the following is most appropriate to confirm a diagnosis?

- A. Biopsy.
- B. Culture.
- C. Exfoliative cytology.
- D. Direct visual fluorescent examination.

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An incisional biopsy of a clinically suspicious malignant lesion fails to support the clinical diagnosis. The most appropriate management is to

- A. reassure the patient that there is no malignancy.
- B. contact the pathologist to discuss the case.
- C. recall the patient in six months.
- D. perform a cytological smear.

Most cases of erosive oral lichen planus are effectively treated with

- A. antifungals.
- B. antibacterials.
- C. antimalarials.
- D. corticosteroids.

Which of the following drugs is most appropriate first line management for a patient experiencing an acute asthmatic attack?

- A. Isoproterenol.
- B. Salbutamol.
- C. Epinephrine.
- D. Hydrocortisone.

Which of the following is the most appropriate management for a child with acute primary herpetic gingivostomatitis?

- A. Analgesic and hydration therapy.
- B. Antibiotic therapy.
- C. Topical corticosteroid therapy.
- D. Topical antifungal therapy.

The most appropriate management for a gingival cyst of the newborn is

- A. curettage.
- B. incisional biopsy.
- C. cytologic smear.
- D. excisional biopsy.
- E. observation.

Gingival enlargement observed in acute leukemia is due to

- A. reactive fibrosis.
- B. edema.
- C. tissue infiltration by neoplastic cells.
- D. capillary fragility.

A 14 year old boy presents with bilateral white thickening of the buccal mucosa which has been present since birth. His brother has similar lesions. The most likely diagnosis is

- A. leukoplakia.
- B. lichen planus.
- C. mucous patches.
- D. white sponge nevus.

Down syndrome is associated with

- A. hypertelorism.
- B. papular rash.
- C. mandibular prognathism.
- D. Hutchinson's teeth.
- E. macroglossia.

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Nicotinic stomatitis is

- A. associated with squamous cell carcinoma of the palate.
- B. caused by smokeless tobacco.
- C. characterized by small red dots on an elevated pale mucosa.
- D. characterized by dysplastic changes.
- E. irreversible.

What is the most appropriate management for erythroleukoplakia?

- A. Observation.
- B. Replacement of amalgam restorations.
- C. Change in diet.
- D. Biopsy.
- E. Carbon dioxide laser ablation.

Which of the following is NOT a true cyst?

- A. Dentigerous cyst.
- B. Simple bone cyst/traumatic bone cyst.
- C. Radicular cyst.
- D. Nasopalatine cyst.

Multiple congenitally missing teeth may be characteristic of

- A. cleidocranial dysplasia.
- B. ectodermal dysplasia.
- C. Gardner's syndrome.
- D. Gorlin-Goltz's syndrome.

The most likely diagnosis of a 1cm mobile mass in the parotid is

- A. mucoepidermoid carcinoma.
- B. pleomorphic adenoma.
- C. adenoid cystic carcinoma.
- D. acinic cell carcinoma.
- E. Warthin's tumour.

The most common site and patient age for a solid (conventional) ameloblastoma are the posterior

- A. mandible; 20 years.
- B. mandible; 40 years.
- C. maxilla; 20 years.
- D. maxilla; 40 years.

Which of the following lesions is most commonly found in the anterior region of the mandible?

- A. Ameloblastoma.
- B. Calcifying epithelial odontogenic tumor.
- C. Central cementifying fibroma.
- D. Periapical osseous dysplasia (periapical cemento-osseous dysplasia).

A mucocele results from

- A. aplasia of the duct.
- B. hyperplasia of the duct.
- C. damage to the duct.
- D. hypersecretion.

The most common benign tumour of the salivary glands is a/an

- A. Warthin's tumour.
- B. pleomorphic adenoma.
- C. canalicular adenoma.
- D. mucocele.

Which of the following is caused by a microorganism?

- A. Geographic tongue.
- B. Lichen planus.
- C. Median rhomboid glossitis.
- D. Pyogenic granuloma.

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The most common site for breast carcinoma to metastasize to the maxillofacial regions is the

- A. anterior maxilla.
- B. anterior mandible.
- C. posterior maxilla.
- D. posterior mandible.
- E. hard palate.

Which of the following lesions is most commonly found in the anterior region of the mandible?

- A. Ameloblastoma.
- B. Calcifying epithelial odontogenic tumour.
- C. Central cementifying fibroma.
- D. periapical osseous dysplasia (periapical cemento-osseous dysplasia).

Tissue from a multilocular radiolucent area of the posterior mandible histologically shows follicular areas lined with columnar cells resembling the enamel organ. The most probable diagnosis is a/an

- A. neurofibroma.
- B. ameloblastoma.
- C. central ossifying fibroma.
- D. lateral periodontal cyst.
- E. dentigerous cyst.

Which of the following is NOT associated with an aphthous ulcer?

- A. Pain.
- B. Pseudomembrane.
- C. Vesicle.
- D. Inflammation.

Smoker's melanosis

- A. is painful.
- B. may be pre-cancerous.
- C. most commonly affects the anterior gingiva.
- D. resolves within a few weeks after quitting smoking.

Which of the following is the most common site in the oral cavity for a squamous cell carcinoma?

- A. Floor of the mouth.
- B. Buccal mucosa.
- C. Palate.
- D. Gingiva.

A dentoalveolar abscess most frequently originates from

- A. a post-extraction infection.
- B. trauma.
- C. periodontal inflammation.
- D. pulpal necrosis.

Mottled enamel is associated with

- A. regional odontodysplasia.
- B. fluorosis.
- C. amelogenesis imperfecta.
- D. tetracycline therapy.

Which of the following lesions has the LEAST favourable prognosis?

- A. Basal cell carcinoma.
- B. Ameloblastoma.
- C. Melanoma.
- D. Verrucous carcinoma.

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A cementoblastoma is typically a solitary circumscribed

- A. radiopacity with a radiolucent rim involving the apices of a mandibular molar.
- B. radiolucency involving the apices of the mandibular incisors.
- C. radiopacity with a radiolucent rim involving the apex of a mandibular incisor.
- D. radiolucency in an edentulous area.

The most common malignant tumour of the tongue is a/an

- A. adenocarcinoma.
- B. fibrosarcoma.
- C. squamous cell carcinoma.
- D. granular cell myoblastoma.

Healing of a recurrent herpes simplex lesion occurs within

- A. 7-14 days without scar formation.
- B. 7-14 days with scar formation.
- C. 2-4 weeks without scar formation.
- D. 2-4 weeks with scar formation.

Which of the following tumours has the best prognosis?

- A. Osteosarcoma.
- B. Melanoma.
- C. Ameloblastoma.
- D. Adenocarcinoma.

What type of lesions are seen in primary herpetic gingivostomatitis, herpes simplex, herpes zoster and varicella?

- A. Macules.
- B. Papules.
- C. Vesicles.
- D. Pustules.

Basal cell carcinoma on the nose

- A. normally metastasizes to the submental lymph nodes.
- B. normally metastasizes to the submaxillary lymph nodes.
- C. normally metastasizes to the cervical lymph nodes.
- D. normally metastasizes to the pre-auricular lymph nodes.
- E. does not normally metastasize.

Difficulty in mouth opening, dysphagia, tongue stiffness and generalized induration of the skin are characteristic of

- A. lupus erythematosus.
- B. scleroderma (systemic sclerosis).
- C. erythema multiforme.
- D. lichen planus.
- E. malignant tumour.

A simple bone cyst/traumatic bone cyst is a radiolucency most frequently seen

- A. in the mandibular ramus.
- B. posteriorly to the maxillary molars.
- C. from the symphysis to the ramus of the mandible.
- D. in the maxillary premolar area.

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Recurrent herpes labialis is

- A. caused by a different organism than is primary herpetic gingivostomatitis.
- B. a form of disease which heals by scarring.
- C. occurs more frequently in children.
- D. a contagious lesion.

Patients with primary herpetic gingivostomatitis should NOT receive

- A. acetaminophen.
- B. acyclovir.
- C. benzocaine.
- D. prednisone.
- E. chlorhexidine.

Which of the following drugs is LEAST likely to cause gingival hyperplasia?

- A. Cyclosporine.
- B. Fluoxetine.
- C. Phenytoin.
- D. Nifedipine.

What is the most appropriate medication to manage postoperative pain for an asthmatic patient taking beclomethasone and salbutamol?

- A. Acetylsalicylic acid.
- B. Acetylsalicylic acid/codeine combination.
- C. Ibuprofen.
- D. Acetaminophen/codeine combination.
- E. Naproxen.

Which local anesthetic should be used to achieve the longest pain relief for a patient requiring the surgical extraction of tooth 3.8?

- A. Articaine 4%, with epinephrine 1:100,000.
- B. Bupivacaine 0.5%, with epinephrine 1:200,000.
- C. Lidocaine 2%, with epinephrine 1:100,000.
- D. Mepivacaine 3% plain.
- E. Prilocaine 4%, with epinephrine 1:200,000.

For a 1 year old child with primary herpetic gingivostomatitis, the most appropriate management is to

- A. prescribe antibiotics.
- B. immunize against chicken pox.
- C. maintain adequate fluid intake.
- D. debride the lesions.
- E. swab the lesions with chlorhexidine.

For a 4 year old child, the most appropriate management for a chronically infected, non-restorable primary first molar is to

- A. extract it and place a space maintainer.
- B. observe it until it exfoliates.
- C. extract it only.
- D. observe it until it becomes symptomatic.

A lingual plate is indicated as a major connector for a removable partial denture when

- A. insufficient room exists for a lingual bar.
- B. a palatal torus is present.
- C. a retromylohyoid undercut is present.
- D. there is a low attachment of the lingual frenum.

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The etiology of an Angle Class II malocclusion in a 12 year old with an SNA = 82° and an SNB = 75° is most likely

- A. dental.
- B. skeletal.
- C. neuromuscular.
- D. dental and neuromuscular.
- E. skeletal and dental.

An extreme overjet, a recessive chin and a deep labial mento-labial sulcus are common findings in which facial type?

- A. Prognathic.
- B. Mesognathic.
- C. Retrognathic.
- D. Crossbite.

A tooth with a nonvital pulp may occasionally present radiographically with shortening or blunting of the apical tip of a root. The loss of apical cementum and dentin would be classified as what type of resorption?

- A. Surface.
- B. Inflammatory.
- C. Replacement.
- D. Ankylosis.

A 50 year old obese patient was diagnosed with type 2 diabetes last year and has recently started taking an oral hypoglycemic. He frequently skips meals in order to reduce his weight. During his 8:30 a.m. appointment, his speech becomes slurred and he is less alert than usual. Which of the following is the most appropriate management?

- A. Have him drink 175ml of diet cola.
- B. Give him 15g of glucose as tablets or in a solution.
- C. Have him eat a chocolate bar.
- D. Dismiss the patient and advise him to eat.

The permanent maxillary canine most commonly erupts

- A. before the mandibular permanent canine.
- B. before the maxillary first premolar.
- C. before the maxillary second permanent molar.
- D. after the maxillary second permanent molar.

Between the ages of 6 and 12, mandibular arch length will normally

- A. increase with the eruption of the permanent mandibular canines.
- B. increase with eruption of the mandibular premolars.
- C. remain the same.
- D. decrease with the eruption of the permanent mandibular incisors.
- E. decrease with the eruption of the mandibular premolars.

Enamel maturation is completed

- A. when the enamel organ is complete.
- B. prior to eruption but after root formation has begun.
- C. at eruption.
- D. following eruption.

The term "subdivision" in malocclusion classification refers to molar relationships that are

- A. bilateral.
- B. unilateral.
- C. mildly abnormal.
- D. severely abnormal.

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An Angle Class II, division 1 malocclusion can be differentiated from an Angle Class II, division 2 malocclusion based upon the

- A. molar relationship.
- B. severity of the Angle Class II malocclusion.
- C. amount of overbite.
- D. inclination of maxillary incisors.
- E. amount of crowding present.

The area most susceptible to excessive space loss following premature loss of a primary tooth is in the region of the

- A. mandibular first premolar.
- B. maxillary first premolar.
- C. mandibular second premolar.
- D. maxillary second premolar.

A mesial step relationship most commonly results in which of the following permanent first molar relationships?

- A. Angle Class I.
- B. Angle Class II.
- C. Angle Class III.

A 4 year old with a thumbsucking habit presents with a 1.5cm anterior open bite. If the habit ceases within six months, the anterior open bite will, over time, most likely

- A. remain the same.
- B. increase.
- C. decrease.
- D. decrease and the midline will correct.

A tongue thrust is most often found in a child with

- A. a deep overbite.
- B. an anterior open-bite.
- C. an Angle Class II, division 2 malocclusion.
- D. a bimaxillary protrusion.

Ankylosis of the primary maxillary central incisors is commonly related to

- A. trauma.
- B. thumbsucking.
- C. chronic gingivitis.
- D. delayed eruption of the permanent teeth.

A Class III malocclusion is normally associated with

- A. sleeping habits.
- B. growth discrepancy.
- C. tooth size - jaw size discrepancy.
- D. trauma.

Which of the following is a possible cause of an anterior crossbite?

- A. An abnormal labial frenum.
- B. A skeletal Class II malocclusion.
- C. The early loss of a primary maxillary canine.
- D. An over-retained primary maxillary incisor.

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The most appropriate time for surgical treatment of a patient with mandibular prognathism is

- A. just before the beginning of the prepubertal growth spurt.
- B. just after the end of the prepubertal growth spurt.
- C. just before eruption of the second permanent molars.
- D. just after eruption of the second permanent molars.
- E. following the completion of growth.

In an 8-year old, the optimum time for treatment of an anterior crossbite of dental origin is

- A. as soon as possible.
- B. after the maxillary canines are in position.
- C. after the maxillary premolars erupt.
- D. following completion of jaw growth.

When the primary maxillary second molar is lost prematurely, the permanent first molar usually moves with the

- A. mesiobuccal cusp rotating lingually.
- B. mesiobuccal cusp rotating buccally.
- C. crown tipping buccally.
- D. crown tipping lingually

The leeway space is

- A. the distance between the maxillary and mandibular occlusal surfaces when the mandible is in rest position.
- B. the difference in size between the combined widths of the primary cuspids and molars and the permanent cuspids and bicuspids.
- C. the space distal to the mandibular primary canine and mesial to the maxillary primary canine.
- D. the space between primary anterior teeth.

The most appropriate management of an avulsed maxillary central incisor in a 10 year old is the placement of a

- A. removable space maintainer.
- B. bonded resin bridge (Maryland bridge).
- C. conventional fixed partial denture.
- D. single tooth implant.

A posterior crossbite in the deciduous dentition will most likely

- A. be present in the permanent dentition.
- B. self-correct with the eruption of the permanent teeth.
- C. self-correct with the cessation of an associated habit.
- D. result in inadequate arch length.

Which of the following malocclusions is most appropriately corrected immediately upon diagnosis?

- A. Angle Class II division 1.
- B. Angle Class II division 2.
- C. Cross-bite with a lateral functional shift.
- D. Midline diastema.

In a child, correction of a bilateral posterior constriction of the maxillary arch has the WORST long term prognosis for stability if

- A. the maxillary posterior teeth are centred on the alveolar process.
- B. a quadhelix is used for treatment.
- C. there is a functional shift from initial contact to maximum intercuspatation.
- D. there is a history of prolonged thumb sucking.

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Orthodontic closure of a 2mm maxillary midline diastema is most appropriately accomplished

- A. prior to complete eruption of the maxillary central incisors.
- B. prior to eruption of the maxillary lateral incisors.
- C. after complete eruption of the maxillary lateral incisors.
- D. during intra-oral emergence of the maxillary canines.
- E. after complete eruption of the maxillary canines.

Appropriate forces for orthodontic tooth movement are

- A. intermittent and light.
- B. continuous and heavy.
- C. intermittent and heavy.
- D. continuous and light.

In orthodontics, how much activation is produced from a single turn of a palatal expansion screw?

- A. 0.25mm.
- B. 0.5mm.
- C. 0.75mm.
- D. 1.0mm.

Ideal orthodontic tooth movement involves

- A. large forces.
- B. undermining resorption.
- C. frontal resorption.
- D. subcrestal incisions.

The use of a maxillary anterior bite plane may result in

- A. translation of the maxillary incisors.
- B. extrusion of the mandibular incisors.
- C. extrusion of the maxillary posterior teeth.
- D. no occlusal changes.

Maxillary skeletal arch expansion

- A. is easiest in the preadolescent patient.
- B. requires surgery in skeletally immature patients.
- C. decreases arch space.
- D. increases overbite.

Interceptive orthodontic treatment has NO effect on the

- A. final basal bone width of the mandible.
- B. direction of growth of the mandible.
- C. space available for the eruption of the permanent dentition.
- D. angulation of the teeth in the permanent dentition.

The most appropriate opportunity for orthodontic treatment involving growth manipulation is

- A. during the late primary dentition.
- B. after the eruption of third molars.
- C. after skeletal growth is complete.
- D. during the period of greatest growth velocity.

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A periapical radiograph reveals a mesiodens in a 7 year old. The maxillary right central incisor has erupted only partially. The maxillary left central incisor has not yet appeared. The most appropriate management is to

- A. remove the mesiodens and observe progress carefully.
- B. allow the mesiodens to erupt before attempting extraction.
- C. remove the mesiodens, immediately band the unerupted central incisor and initiate orthodontic therapy.
- D. allow the mesiodens and the right central incisor to erupt into the oral cavity to determine their relative positions.

Intraosseous nutrient canals are most frequently seen on which of the following radiographs?

- A. Mandibular posterior periapical.
- B. Mandibular anterior periapical.
- C. Maxillary posterior periapical.
- D. Maxillary anterior periapical.

Regardless of the focal spot-to-film distance employed for intraoral radiographic examinations, the diameter of the primary beam at the patient's skin surface should NOT be greater than

- A. the longest side of the film.
- B. the size of the lead diaphragm.
- C. 7cm.
- D. the size of the filter.

Which of the following exposure factors will result in the most penetrating x-rays?

- A. 10kVp - 65mA.
- B. 85kVp - 5mA.
- C. 90kVp - 10mA.
- D. 65kVp - 15mA.
- E. 75kVp - 40mA.

Proper collimation of the useful beam for film size and focal spot-film distance reduces

- A. image definition.
- B. secondary radiation.
- C. radiographic contrast.
- D. intensity of the central beam.

In radiography, too high a temperature of the developer will cause increased

- A. contrast.
- B. density.
- C. grey levels.
- D. resolution.

Increasing the kVp results in decreased

- A. density of the image.
- B. contrast of the image.
- C. energy of the x-ray beam.

Radiographic image distortion can be minimized by

- A. decreasing focal spot-to-object distance and decreasing object-to-film distance.
- B. decreasing focal spot-to-object distance and increasing object-to-film distance.
- C. increasing focal spot-to-object distance and decreasing object-to-film distance.
- D. increasing focal spot-to-object distance and increasing object-to-film distance.

Mean x-ray beam energy is a function of

- A. exposure time.
- B. tube current.
- C. tube voltage.
- D. collimation.

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Crown-root ratio and residual bone support can best be seen radiographically in a

- A. panoramic radiograph.
- B. bite-wing radiograph.
- C. periapical radiograph using the bisecting angle technique.
- D. periapical radiograph using the paralleling technique.

A filter is inserted in the path of the x-ray beam to

- A. limit the area of surface exposure.
- B. absorb scatter radiation.
- C. absorb long wave length radiation in the primary beam.
- D. make it possible to use higher kilovoltage for improving image quality.

Which of the following lesions is most radiopaque?

- A. Calcifying odontogenic cyst.
- B. Fibrous dysplasia of bone.
- C. Ameloblastoma.
- D. Complex composite odontoma.

The radiographic change most suggestive of multiple myeloma is

- A. punched-out radiolucent lesions.
- B. multiple radiopaque lesions.
- C. diffuse “ground glass” appearance.
- D. generalized demineralization.

A radiopaque area within the alveolar process containing several rudimentary teeth suggests a/an

- A. adenomatoid odontogenic tumour.
- B. compound odontoma.
- C. complex odontoma.
- D. calcifying epithelial odontogenic tumour.

Which of the following is most radiopaque?

- A. Lamina dura.
- B. Enamel.
- C. Cortical bone.
- D. Gold inlay.
- E. Composite restoration.

Which syndrome has multiple cysts of the jaws?

- A. Gardner's.
- B. Gorlin.
- C. Peutz-Jeghers.
- D. Sjögren's.

In clinically normal periodontium, the distance between the bottom of the gingival sulcus and the alveolar crest is

- A. 0.5-1mm.
- B. 1.5-2mm.
- C. 3-5mm.

What is the most likely diagnosis for a patient who complains of dull, constant pain in his jaws upon awakening?

- A. Acute pulpitis.
- B. Sinusitis.
- C. Bruxism.
- D. Chronic gingivitis.

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Compared to nonsmokers, patients who smoke have

- A. increased salivary antibodies (immunoglobulin A).
- B. increased serum IgG antibody response to periodontal pathogens.
- C. decreased serum T lymphocytes.
- D. decreased collagenase in periodontal tissue.

The Periodontal Screening and Recording System (PSR®) is designed to

- A. document the progression of periodontitis.
- B. assess the periodontal status of a patient.
- C. measure loss of attachment for large patient populations.
- D. evaluate oral hygiene.

Radiographs of a periodontally related osseous defect can be used to confirm the

- A. number of bony walls.
- B. measurement of the clinical attachment loss.
- C. location of the epithelial attachment.
- D. presence of bone loss.

A dental restoration with a marginal discrepancy (void) located 1mm subgingivally can affect gingival health by

- A. creating an environment conducive to an altered microbial flora.
- B. impinging on the biologic width.
- C. causing furcation involvement.
- D. causing leaching of restorative materials into the gingival crevice.

A "pregnancy tumor" is

- A. not associated with local irritants.
- B. a benign neoplasm.
- C. clinically identical to a pyogenic granuloma.

Loss of attachment in periodontal disease occurs

- A. at a consistent rate.
- B. in cycles lasting for about 3 months.
- C. in random cycles.

Pathologic migration of teeth is associated with

- A. lip incompetence.
- B. tongue thrust.
- C. bruxism.
- D. periodontitis.

When smokers are compared to nonsmokers, probing depths after surgical periodontal treatment are

- A. greater.
- B. smaller.
- C. the same.

The earliest clinical sign of gingivitis is

- A. increased tooth mobility.
- B. bleeding on probing.
- C. change in color of the attached gingiva.
- D. change in consistency of the attached gingiva.

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Which of the following is NOT a feature of aggressive periodontitis?

- A. Localized and generalized forms.
- B. Familial aggregation.
- C. Necrotic tissue.
- D. Presence of *Aggregatobacter actinomycetemcomitans*.

A patient successfully treated 8 years ago for moderate chronic periodontitis now presents with generalized erythematous and edematous gingiva with bleeding on probing. There is no clinical or radiographic evidence of further attachment loss. The most likely diagnosis is

- A. gingivitis.
- B. chronic periodontitis.
- C. aggressive periodontitis.
- D. recurrent periodontitis.

Which of the following is NOT characteristic of periodontitis?

- A. Hypertrophy of the gingiva.
- B. Pocket formation without suppuration.
- C. Destruction of the periodontal ligament.
- D. Alveolar bone resorption.

What is the most likely diagnosis of an ulcerated gingival lesion whose biopsy report confirms epithelial basal layer separation from the lamina propria?

- A. An aphthous ulcer.
- B. Erosive lichen planus.
- C. Pemphigus vulgaris.
- D. Mucous membrane pemphigoid (cicatricial pemphigoid).

A common feature of the oral mucosal lesions of lichen planus, leukoplakia, hyperkeratosis and discoid lupus erythematosus is that they are

- A. premalignant.
- B. hyperkeratotic.
- C. due to chronic infection.
- D. granulomatous proliferations.
- E. associated with drug use.

Which of the following can be associated with an impacted tooth?

- A. Periapical osseous dysplasia (periapical cemento-osseous dysplasia).
- B. Peripheral odontogenic fibroma.
- C. Cementoblastoma.
- D. Ameloblastoma.

If mucous glands are seen in the epithelial lining of a dentigerous cyst, this is most appropriately called

- A. anaplasia.
- B. metaplasia.
- C. dysplasia.
- D. neoplasia.
- E. hyperplasia.

The most common location for periapical osseous dysplasia (periapical cemento-osseous dysplasia) is the

- A. maxillary anterior region.
- B. mandibular anterior region.
- C. mandibular premolar region.
- D. maxillary posterior region.

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Which of the following organs is typically associated with multiple spider angiomas?

- A. Lungs.
- B. Liver.
- C. Kidneys.
- D. Pancreas.
- E. Gallbladder.

The diagnosis of a 1.5cm white patch after incisional biopsy is severe epithelial dysplasia. The most appropriate management is

- A. complete excision.
- B. repeat biopsy.
- C. radiation therapy.
- D. observation.

What is the correct position of the needle tip for the administration of local anesthetic for an inferior alveolar nerve block?

- A. Anterior to the buccinator muscle.
- B. Medial to the medial pterygoid muscle.
- C. Lateral to the ramus of the mandible.
- D. Superior to the mandibular foramen.
- E. Inferior to the pterygomandibular raphe.

A patient has an acute apical abscess (acute periradicular abscess) on tooth 1.3. The tooth must be extracted. In addition to a palatine injection, the most appropriate local anesthetic technique is a/an

- A. buccal infiltration.
- B. infraorbital block.
- C. middle superior alveolar block.
- D. intraligamentary injection.

Following the injection of 1.8ml of 2% lidocaine with 1:100,000 epinephrine, a nervous 22 year old male with well controlled insulin dependent diabetes states that he feels dizzy and weak. Beads of sweat have accumulated on his forehead and upper lip. He is quite pale. The initial management of this patient is to

- A. administer glucagon 1.0mg.
- B. administer epinephrine 0.5mg.
- C. administer diphenhydramine 50mg.
- D. elevate the patient's legs and administer 100% oxygen.
- E. call 911 and begin CPR.

Which of the following clinical conditions is the most serious?

- A. Acute apical abscess of a mandibular central incisor.
- B. Mid facial cellulitis.
- C. Chronic apical abscess of a mandibular third molar.
- D. Infected dentigerous cyst.

Hemorrhagic shock is a circulatory disturbance characterized by

- A. increase in blood pressure.
- B. alteration in circulating blood volume.
- C. elevation of temperature.
- D. decrease in amount of interstitial fluid.

Which of the following is common to all forms of hemorrhagic shock?

- A. Sepsis.
- B. Hypovolemia.
- C. Hypertension.
- D. Vasoconstriction.
- E. Impaired tissue perfusion.

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Which drug is indicated as part of the management for a codeine overdose?

- A. Atropine.
- B. Diphenhydramine.
- C. Epinephrine.
- D. Flumazenil.
- E. Naloxone.

After completion of root canal therapy on a maxillary first premolar with moderate mesial and distal lesions and intact buccal and lingual surfaces, the restoration of choice is a/an

- A. MOD composite resin.
- B. MOD onlay.
- C. MOD pin retained amalgam.
- D. MOD bonded amalgam.

The gingival tissues remain healthier when margins of crowns are placed

- A. about 1mm below the gingival crest.
- B. above the gingival crest.
- C. at the gingival crest.

The principal internal retention for a Class V amalgam cavity preparation is established at the

- A. occluso-axial and gingivo-axial line angles.
- B. mesio-axial and disto-axial line angles.
- C. mesio-gingival and disto-gingival line angles.

A line angle NOT present on a Class I cavity preparation on tooth 1.5 is

- A. mesiopulpal.
- B. buccopulpal.
- C. linguopulpal.
- D. axiopulpal.

Nickel-chromium alloys designed for porcelain bonded to metal crowns should be used with caution because

- A. nickel is an allergen.
- B. the modulus of elasticity is low.
- C. these alloys cannot be soldered.

Marginal leakage of a composite resin restoration will

- A. not be detectable.
- B. be minimized by use of a bonding agent.
- C. decrease with longevity.

Following a simple extraction of tooth 4.7, hemostasis was achieved. Forty-eight hours later, there is renewed bleeding from the extraction site. Firm pressure fails to achieve hemostasis. The most appropriate management is to

- A. give local anesthetic, pack and suture.
- B. apply firm pressure and ice for 10 minutes.
- C. obtain an international normalized ratio (INR) and a complete blood count.
- D. give local anesthetic and electrocauterize the socket.

The diagnosis for a patient having a sinus tract associated with a nonvital pulp who presents with no symptoms is

- A. acute apical abscess (acute periradicular abscess).
- B. asymptomatic apical periodontitis (chronic periradicular periodontitis).
- C. periodontal abscess.
- D. chronic apical abscess (chronic periradicular abscess).

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Which of the following is the hardest?

- A. Amalgam.
- B. Enamel.
- C. Composite resin.
- D. Type IV alloy.

The epithelium covering the lesions of hyperplastic pulps is believed to be derived from the

- A. reduced enamel epithelium.
- B. epithelium of the gingiva.
- C. odontoblastic layer.
- D. epithelial rests of Malassez.
- E. remnants of the dental lamina.

The smear layer present on the root canal wall after cleaning and shaping is best removed by using

- A. EDTA.
- B. hydrogen peroxide.
- C. chlorhexidine.
- D. isopropyl alcohol.

What is the most appropriate initial management of a tooth which is sensitive to percussion but responds normally to electric pulp testing?

- A. Pulpectomy.
- B. Occlusal assessment.
- C. Pulpotomy.
- D. Restoration replacement.

Chelating agents are useful to treat a tooth with a/an

- A. curved canal.
- B. sclerotic canal.
- C. apical abscess (periradicular).
- D. root perforation.

What structure is most likely to dislodge a complete mandibular denture?

- A. Retromolar pad.
- B. Buccinator muscle.
- C. Mylohyoid muscle.
- D. Pterygomandibular raphe.

Recurrent unilateral submandibular swelling and pain just prior to meals is indicative of

- A. an odontogenic infection.
- B. sialolithiasis.
- C. ranula.
- D. sarcoidosis.
- E. Sjögren's syndrome.

Acute or subacute suppurative osteomyelitis occurs most frequently in the

- A. anterior maxilla.
- B. posterior mandible.
- C. posterior maxilla.
- D. anterior mandible.

Unilateral numbness of the chin is associated with

- A. malignancy.
- B. Bell's palsy.
- C. apical abscess.
- D. trigeminal neuralgia.

Hypochromic anemia is associated with

- A. iron deficiency.
- B. aminopyrine therapy.
- C. vitamin B<sub>12</sub> deficiency.
- D. folic acid deficiency.

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Primary herpes simplex virus infection

- A. usually occurs after the age of 20.
- B. has a slow onset.
- C. may be subclinical.
- D. lasts for 1 - 2 days.
- E. affects only the gingiva.

The white appearance of the oral mucosa following extended local application of acetylsalicylic acid is

- A. hyperparakeratosis.
- B. acanthosis.
- C. coagulation necrosis.
- D. edema.

Clinical examination of a 42 year old heavy smoker reveals a white patch in the retromolar/tonsillar pillar region. The patch cannot be wiped off. The most likely diagnosis is

- A. lichen planus.
- B. leukoplakia.
- C. white sponge nevus.
- D. frictional hyperkeratosis.
- E. pseudomembranous candidiasis.

A 29 year old patient developed multiple ulcerated lesions on the buccal attached gingiva one day ago. No fever, malaise or lymphadenopathy is present. The most likely diagnosis is

- A. primary herpetic gingivostomatitis.
- B. recurrent herpes simplex infection.
- C. aphthous ulcers.
- D. necrotizing ulcerative gingivitis.

Heavy cigarette smoking significantly increases the incidence of

- A. aphthous stomatitis.
- B. geographic tongue.
- C. lichen planus.
- D. atrophic glossitis.
- E. mucosal pigmentation.

Koplik's spots are seen in the oral cavity of patients with

- A. chickenpox.
- B. mumps.
- C. measles.
- D. scarlet fever.
- E. smallpox.

A squamous cell carcinoma located near the midline of the anterior floor of the mouth normally spreads to which of the following lymph nodes?

- A. Unilateral neck lymph nodes.
- B. Mediastinal lymph nodes.
- C. Bilateral neck lymph nodes.
- D. Retropharyngeal lymph nodes.

Histological sections of a lesion removed from the apex of a carious tooth show fibrous tissue and chronic inflammatory cells. The most likely diagnosis is a/an

- A. odontogenic fibroma.
- B. periradicular cyst.
- C. periradicular granuloma.
- D. central ossifying fibroma.

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Which of the following is the most likely cause of periodontal pocket formation following crown preparation?

- A. Inadequate use of water with the high-speed handpiece.
- B. Invasion of the biological width.
- C. Existing periodontal disease.
- D. The use of chemical retraction agents.

The vibrating line in a completely edentulous maxilla is

- A. the junction between the hard and soft palate.
- B. a well-defined line that maintains a distinct shape and location.
- C. the junction between the movable and immovable soft palate.
- D. an imaginary line that crosses the soft palate posterior to the fovea palatini.

A facebow relates the

- A. mandibular arch to the glenoid fossa.
- B. vertical axis of the maxilla to the mandible.
- C. hinge axis to the maxillary arch.
- D. maxilla to the mandible at the vertical dimension of occlusion.

A metal-ceramic crown is being placed on tooth 1.6. The patient has ideal occlusal relationships and the crown has been adjusted so that it is not in supraocclusion. Which of the following occlusal contact points should be eliminated?

- A. Inclined lingual plane of the mesiobuccal cusp.
- B. Mesial marginal ridge.
- C. Mesial lingual cusp tip.
- D. Central fossa.

Compared to heat-cured acrylic resins, cold-cure acrylic resins are

- A. harder and more colour stable.
- B. less hard and more colour stable.
- C. less hard and less colour stable.
- D. harder and less colour stable.

The most appropriate management of an 8 year old patient with cavitated occlusal enamel lesion of the permanent first molars is

- A. tooth brushing and oral hygiene instruction.
- B. topical fluoride application.
- C. pit and fissure sealants.
- D. preventive resin restorations.

The principal advantage of polyether impression materials over polysulfide polymer impression materials is

- A. longer shelf life.
- B. superior accuracy.
- C. superior surface on the cast.
- D. less dimensional change with time.

The use of a reservoir on the sprue of a wax pattern decreases

- A. volumetric changes in the casting.
- B. casting porosity from inclusion of gases.
- C. casting porosity from inclusion of foreign bodies.
- D. casting porosity during solidification.

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Polysulfide rubber base impressions should be

- A. poured immediately.
- B. poured within an hour.
- C. immersed in a fixing solution before pouring.
- D. immersed in water 10 minutes before pouring.
- E. coated with a thin film of separating medium.

The rate of "set" of polysulfide impression materials is accelerated by

- A. increasing the mixing temperature.
- B. decreasing the mixing temperature.
- C. adding oleic acid to the mix.
- D. increasing the base/catalyst ratio.

The working time of zinc-phosphate cement

- A. is shortened if moisture condenses on the mixing slab during the mixing process.
- B. is lengthened if the powder is mixed with the liquid as quickly as possible.
- C. is shortened if the mixing slab is cooled.
- D. is shortened by adding a small quantity of powder to the liquid a minute prior to start mixing.

Following successful root canal therapy, the most desirable apical tissue response would be

- A. cementum deposition into the apical foramen.
- B. formation of a connective tissue capsule over the foramen.
- C. proliferation of epithelium from the apical periodontal ligament.
- D. a chronic low grade inflammatory response surrounded by normal bone.

During setting, a gypsum-bonded investment material will undergo an additional expansion if it occurs

- A. under water.
- B. under vacuum.
- C. in a cold environment.
- D. in a dry environment.

The most likely reason for porcelain fracturing off a long and narrow metal-ceramic fixed partial denture is that the framework alloy had an insufficient

- A. elastic modulus.
- B. proportional limit.
- C. fracture toughness.
- D. tensile strength.

The primary purpose of surgical therapy for the treatment of periodontitis is to

- A. apically position the flap.
- B. eliminate periodontal pockets.
- C. remove the ulcerated epithelium of the periodontal pocket.
- D. improve access for removal of local etiologic factors.

Before performing periodontal surgery, it is important to

- A. prescribe a mouthwash.
- B. prescribe systemic antibiotics.
- C. control plaque.

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Guiding planes on abutment teeth for a removable partial denture should be prepared before the occlusal rests are prepared in order to

- A. avoid post-insertion adjustment.
- B. facilitate surveying of the cast.
- C. improve the retention of the direct retainer assembly.
- D. finalize the location of the occlusal rest.
- E. minimize the preparation needed for the occlusal rests.

The base of a distal extension partial denture should cover the maximum support area because

- A. the force transmitted per unit area will be kept to a minimum.
- B. maximum number of artificial teeth can be placed.
- C. phonetics is improved.
- D. strength of the base is increased.

The primary stress bearing area of the maxillary complete denture is the

- A. hard palate.
- B. alveolar ridge.
- C. median palatal raphe.
- D. zygoma.

The gingival aspect of a pontic which touches the alveolar ridge should be

- A. convex only in the mesiodistal direction.
- B. concave faciolingually and convex mesiodistally.
- C. small and convex in all directions.
- D. fabricated to produce slight tissue compression.

Which component of a partial denture framework provides the best indirect retention?

- A. Rest.
- B. Circumferential clasp.
- C. Lingual strap.
- D. Proximal plate.

A removable partial denture rest should be placed on the lingual surface of a canine rather than on the incisal surface because

- A. less leverage is exerted against the tooth by the rest.
- B. the enamel is thicker on the lingual surface.
- C. visibility and access are better.
- D. the cingulum of the canine provides a natural recess that does not need to be prepared.

In a removable partial denture, a palatal strap is used instead of a narrow bar because it is

- A. more rigid with less thickness.
- B. easier to polish.
- C. more stable.
- D. less irritating to the soft tissues.
- E. more hygienic.

If adjustment of the occlusal plane of natural teeth opposed by a complete or partial denture is required, it should be completed

- A. after the teeth have been set on the trial denture.
- B. immediately after making the final casts.
- C. upon delivery of the denture.
- D. after the diagnosis and treatment plan has been established.

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The flexibility of a retentive clasp arm is affected by the

- A. location of the reciprocal arm.
- B. length of the retentive arm.
- C. position on the abutment tooth.
- D. location of the occlusal rest.

Long term stability in partial dentures is best ensured by

- A. use of cast clasps.
- B. establishing harmonious occlusion.
- C. incorporating all undercut areas available.
- D. use of indirect retention.

In complete denture construction, custom trays are recommended for polyvinyl siloxane and polysulfide rubber base impression materials to

- A. obtain a uniform thickness of material.
- B. facilitate removal of the impression.
- C. allow for a more uniform setting of the material.
- D. eliminate the need for a tray adhesive.

The extension of the lingual anterior border of a mandibular denture is limited by the

- A. mylohyoid muscle.
- B. geniohyoid muscle.
- C. genioglossus muscle.
- D. fibres of the digastric muscle.

In a patient with complete dentures, cheek biting may result from

- A. an excessive vertical dimension of occlusion.
- B. the use of steep-cusped posterior teeth.
- C. insufficient coverage of the retromolar pad areas.
- D. insufficient horizontal overlap of the posterior teeth.

For a patient allergic to penicillin, what is the most appropriate drug for antibiotic prophylaxis?

- A. Ampicillin.
- B. Cephalexin.
- C. Clindamycin.
- D. Erythromycin.
- E. Metronidazole.

When compared to a conventional complete denture, an overdenture

- A. is more fracture resistant.
- B. preserves more alveolar bone.
- C. causes less soft tissue inflammation.
- D. is less expensive.

When a partial denture framework fits the master cast but does not fit properly in the mouth, the error is likely to be in the

- A. impression making.
- B. casting of the framework.
- C. design of the framework.
- D. preparation of the teeth.

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The major connector of a removable partial denture should be designed to

- A. rigidly connect the denture components.
- B. act as a stress-breaker.
- C. dissipate vertical forces.
- D. distribute forces to the soft tissues.

Which of the following is NOT a direct physiological response to additional forces placed on abutment teeth?

- A. Resorption of bone.
- B. Increase in trabeculation.
- C. Increase in width of cementum.
- D. Decrease in width of periodontal ligament.

Reciprocation as applied to removable partial dentures design refers to the

- A. function of the occlusal rest to counteract occlusal forces.
- B. resistance to flexion of the retentive clasp arm.
- C. return to a passive state of the flexed clasp.
- D. function of the reciprocal clasp arm to counteract the retentive clasp arm.

Rests on terminal abutment teeth for a removable partial denture provide

- A. primary retention.
- B. indirect retention.
- C. occlusal force transmission.
- D. lateral force transmission.

When making maxillomandibular records for a complete denture patient, the vertical dimension of occlusion is acceptable when

- A. interocclusal distance (freeway space) is 8-10mm.
- B. occlusal rims contact evenly and bilaterally at the same time as the lips touch.
- C. the maxillary rim shows just below the upper lip and the mandibular rim is even with the corners of the mouth.
- D. it is equal to the rest vertical dimension.
- E. the difference between the occlusal vertical dimension and the rest vertical dimension is 2-4mm.

Which of the following factors could cause a partial denture framework to fit tighter in the mouth than on the cast?

- A. Too much water in the mix of the stone for the cast.
- B. Not enough water in the mix of the stone for the cast.
- C. Duplication impression slightly oversized.
- D. Improper wax-up of the partial denture.

When epinephrine 1:1000 is administered intramuscularly for the management of anaphylaxis in an adult, the most appropriate volume for an initial dose is

- A. 0.02 – 0.04ml.
- B. 0.3 – 0.5ml.
- C. 1.0 – 1.5ml.
- D. 1.6 – 1.8ml.

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At the first post-insertion appointment, a patient with a new removable partial denture complains of a tender abutment tooth. The most likely cause is

- A. an overextended border on the partial.
- B. inadequate polishing of the framework.
- C. improper path of insertion.
- D. the occlusion.

In which of the following will the effects of polymerization shrinkage be greatest?

- A. Class I occlusal restoration.
- B. Preventive resin restoration.
- C. Direct veneer restoration.
- D. Class IV restoration.

The rate of set of alginate impression materials can be increased by

- A. increasing the water/powder ratio.
- B. increasing the temperature of the mixing water.
- C. adding sodium phosphate to the mixing water.
- D. decreasing the amount of mixing.

Fixed partial denture pontics should

- A. completely replace the missing supragingival tooth structure.
- B. have a concave surface touching the mucosa.
- C. have minimal soft tissue coverage.
- D. hide the porcelain-metal junction on their gingival aspect.

What is the most appropriate endodontic management for a 9 year old patient for tooth 1.1, with an open apex and a necrotic pulp?

- A. Pulpotomy.
- B. Apexification.
- C. Pulpectomy.
- D. Revascularization.
- E. Apical surgery.

Radiographic examination of an intruded primary maxillary central incisor reveals no root fracture and no displacement in the permanent tooth germ. The most appropriate management would be to

- A. extract the tooth.
- B. bring the tooth into position and ligate it.
- C. observe periodically.
- D. remove the tooth and replant it in a more favorable position.

A 7 year old patient presents with a crown fracture of a permanent maxillary central incisor that occurred 3 days ago. The incisal half of the crown is missing, resulting in a 2mm exposure of vital pulp. What is the most appropriate initial management for this tooth?

- A. Apexification.
- B. Pulpotomy.
- C. Pulp capping.
- D. Pulpectomy.

The efficacy of pit and fissure sealants is affected by

- A. occlusal relationship.
- B. opacity of the sealant.
- C. stage of tooth eruption.
- D. type of polymerization reaction.
- E. systemic fluoride treatment.

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Which of the following procedures will NOT improve the retention of a fissure sealant?

- A. Use of separate etching and bonding agents rather than a self-etching bonding agent.
- B. Roughening of the enamel with a 2 round bur.
- C. Maintaining a dry field until the sealant is set.
- D. Use of a bonding agent prior to sealant application.

A labial frenum causes a diastema between the permanent maxillary central incisors. The lateral incisors and canines have not erupted. The most appropriate immediate management is to

- A. perform a frenectomy.
- B. close the space with a fixed orthodontic appliance.
- C. observe the case until the eruption of permanent maxillary lateral incisors and canines.
- D. close the space with a removable orthodontic appliance.
- E. close the space after the eruption of the permanent lateral incisors.

The eruption of a maxillary permanent first molar is prevented by a slight interference with the crown of the primary second molar. Which of the following is the most appropriate management?

- A. Extract the primary molar.
- B. Reduce the distal surface of the primary molar.
- C. Unlock the permanent first molar with elastic and (or) separation wire.
- D. Remove the soft tissue overlying the occlusal surface of the permanent molar.
- E. Wait until more tuberosity growth occurs.

The most appropriate restoration for a primary first molar with extensive carious destruction of the crown is a

- A. posterior composite resin.
- B. pin retained amalgam.
- C. stainless steel crown.
- D. resin-modified glass ionomer.

Oral hygiene for infants' teeth should begin when

- A. the first primary molars erupt.
- B. all primary teeth erupt.
- C. the first tooth erupts.
- D. the infant is weaned from the nursing bottle or breast.

The maxillary central incisors of a 2 year old child have been traumatically intruded 4mm. The most appropriate immediate management is to

- A. carefully remove both incisors.
- B. reposition the intruded teeth.
- C. make the patient comfortable without disturbing the teeth.
- D. reposition and splint the intruded teeth.
- E. order an occlusal radiograph.

In an 8 year old patient the most appropriate treatment of a vital first permanent molar with closed apices and a large carious exposure is

- A. pulpotomy with MTA.
- B. pulpectomy.
- C. direct pulp capping with calcium hydroxide.
- D. indirect pulp capping.

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The most appropriate management for a permanent central incisor with a necrotic pulp and a wide open apex is

- A. pulpotomy.
- B. apexification.
- C. revascularization.
- D. root canal therapy using gutta-percha.
- E. root canal therapy followed by a retrograde filling.

Compared to a set of opposing complete dentures, a maxillary denture opposing a full complement of natural teeth is more often associated with

- A. less denture tooth wear.
- B. greater incidence of denture fracture.
- C. improved retention of the denture.
- D. improved stability of the denture.
- E. improved appearance of the denture.

The preconditioning of a high glass content all-ceramic restoration prior to bonding is achieved by

- A. sandblasting.
- B. acid etching with phosphoric acid.
- C. roughening the surface with a diamond bur.
- D. acid etching with hydrofluoric acid.
- E. degreasing with acetone.

The most appropriate management of an intruded 5.1 with the apex displaced toward the labial bone plate is to

- A. extract.
- B. leave in place and perform a pulpectomy.
- C. reposition and perform a pulpectomy.
- D. allow spontaneous repositioning.

The principal reason for a needle aspiration of an intraosseous radiolucent lesion of the mandible is to

- A. obtain a specimen for histopathological analysis.
- B. determine the presence of a vascular lesion.
- C. decompress a fluid-filled lesion.
- D. drain purulent material.

In primary molars, the cusp with the largest pulp horn is the

- A. distolingual.
- B. distobuccal.
- C. mesiolingual.
- D. mesiobuccal.

A surgical template (stent/guide) for an immediate maxillary denture is used to

- A. control hemorrhage while the new denture is being fabricated.
- B. protect the extraction sites while fitting the denture.
- C. assist in remounting the denture prior to refining the occlusion.
- D. indicate areas that require additional hard or soft tissue reduction.

The shape of the distobuccal border of a mandibular denture is determined primarily by the

- A. buccinator muscle.
- B. tendon of the temporalis muscle.
- C. masseter muscle.

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The characteristic colour seen in the crowns of teeth with internal resorption is due to

- A. deposition of pigment in the cells of the odontoblast layer.
- B. the presence of hyperplastic vascular pulp tissue.
- C. a change in the consistency of the dentin.
- D. the difference in the refractive indices of the normal and affected areas.
- E. the degeneration and necrosis of the pulp tissue.

The aluminum filter in an x-ray machine prevents which of the following from reaching the patient?

- A. Long wavelength x-rays.
- B. High frequency x-rays.
- C. X-rays at the edge of the x-ray beam.
- D. Gamma radiation.

A periapical radiograph of a 7 year old child reveals an inverted mesiodens. Tooth 1.1 is partially erupted and tooth 2.1 has not yet erupted. The most appropriate management is to

- A. allow the mesiodens to erupt.
- B. remove the mesiodens and orthodontically erupt the central incisor.
- C. remove the mesiodens and re-assess.
- D. wait for the mesiodens and the tooth 2.1 to erupt.

Which is the most appropriate initial treatment for a 16 year old patient presenting with multiple extensive carious lesions on 20 teeth?

- A. Place amalgam restorations as quickly as possible.
- B. Excavate and place provisional restorations.
- C. Place the patient on a preventive regime and delay any treatment.
- D. Restore all teeth with gold inlays to utilize the strength of the material.

Which of the following space maintainers is/are most appropriate for a 4 year old child whose mandibular first primary molars have been extracted?

- A. Bilateral band and loops.
- B. Lingual holding arch.
- C. A removable appliance.
- D. Distal shoe appliances.

A 4 year old has a primary central incisor that is yellow but asymptomatic. The most probable diagnosis is

- A. pulpal necrosis.
- B. pulpal calcification.
- C. internal resorption.
- D. external resorption.

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An 8 year old patient presents with 4mm crowding of the mandibular incisors. The patient has a Class I malocclusion and the arches are well aligned. All cephalometric values are normal. The most appropriate management for this patient is

- A. monitor and recall in 6 months.
- B. perform pulpotomies and interproximal discing on the mandibular primary canines.
- C. extract the primary mandibular canines only.
- D. extract the primary mandibular canines and place a lower lingual holding arch.

The placement of a post in an endodontically treated tooth with minimal coronal tooth structure provides

- A. retention for the core.
- B. a ferrule effect.
- C. reinforcement of the remaining root structure.
- D. resistance to root fracture.

Which of the following is the most appropriate for determining the morphology of the temporomandibular joint disc?

- A. Arthrography.
- B. Cone beam CT.
- C. Magnetic resonance imaging.
- D. Corrected tomography.

When preparing a cavity in a primary molar, there is a small mechanical exposure of one of the pulp horns. There is a slight hemorrhage and the dentin surrounding the exposure is sound. The most appropriate treatment is

- A. extraction and space maintenance.
- B. pulp capping, a base and restoration.
- C. pulpectomy and restoration.
- D. base and restoration.

After the crown completion stage, trauma to a developing tooth may be responsible for

- A. enamel hypoplasia.
- B. gemination.
- C. dilaceration.
- D. fusion.

Which of the following has the greatest effect on the mechanical properties of composite resin?

- A. Modulus of elasticity of the filler particles.
- B. Weight fraction of the filler particles.
- C. Volume fraction of filler particles.
- D. Hardness of filler particles.
- E. Size of the filler particles.

Which of the following conditions is an indication for the removal of impacted mandibular third molars?

- A. Recurrent pericoronitis.
- B. Prevention of mandibular incisor crowding.
- C. Reduction of mandibular fracture risk.
- D. Horizontal impaction.

Which of the following space maintainers is/are most appropriate for a patient with the bilateral loss of mandibular first primary molars prior to the eruption of the permanent molars and permanent incisors?

- A. Lingual holding arch.
- B. Bilateral distal shoes.
- C. Bilateral band and loop.
- D. Fixed palatal arch with an anterior button (a Nance appliance).

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Following a pulpotomy in a second primary molar with extensive occlusal caries, what is the most appropriate restoration?

- A. Resin-modified glass ionomer.
- B. Bonded amalgam.
- C. Composite resin.
- D. Stainless steel crown.

During endodontic treatment, which of the following microorganisms is most likely to cause endocarditis in a patient with valvular heart disease?

- A. Streptococci species.
- B. Staphylococcus species.
- C. Candida albicans.
- D. Prevotella species.

A patient with amyloidosis is taking 20 mg prednisone once a day. What is the minimum number of weeks taking the drug that triggers the need for corticosteroid prophylaxis before proceeding with major dentoalveolar surgery under general anesthesia?

- A. 2.
- B. 4.
- C. 6.
- D. 8.

Which of the following is NOT correct regarding nitroglycerin used for medical emergencies?

- A. It is indicated for the definitive management of angina pectoris.
- B. It is indicated for the early management of a myocardial infarction.
- C. It should be administered sublingually.
- D. Its administration will increase blood pressure.
- E. Exposure to air or light shortens the shelf-life of the tablets.

Spontaneous fracture of the mandible may occur during mastication if the patient

- A. has an impacted third molar close to the inferior alveolar canal.
- B. is edentulous and there is advanced atrophy of the mandible.
- C. is a child with unerupted premolars.
- D. is a postmenopausal woman with a full dentition and generalized osteoporosis.

A root fragment of an impacted third molar could be displaced into the submandibular space during its surgical removal when the

- A. attachment of the mylohyoid muscle is apical of the roots.
- B. root of the mandibular third molar lies close to the buccal cortex.
- C. buccal cortical bone in the mandibular third molar area is extremely thin.
- D. bone on the lingual surface is fenestrated below the mylohyoid muscle.

In a tooth with pulpal necrosis, the periradicular region is affected if

- A. there is pain to thermal stimuli.
- B. the tooth throbs when the patient is lying down.
- C. there is pain on percussion.
- D. there is no response to an electric pulp test.

Which statement is true regarding electric pulp testing?

- A. It does not confirm health of the pulp.
- B. Vascularity can be determined.
- C. True vitality can be determined.
- D. Thicker enamel will lead to a quicker response.

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Which of the following is NOT a characteristic of an acute apical abscess (acute periradicular abscess)?

- A. Pain on percussion.
- B. Tooth feels elongated.
- C. Pain to a cold stimulus.
- D. Pain on palpation.

A post is used in an endodontically treated tooth to

- A. obturate the canal.
- B. strengthen the root.
- C. reinforce the remaining crown.
- D. retain the restoration.

When cementing a gold inlay, the best way to ensure accurate seating is to

- A. apply a firm pressure on the inlay until the cement is set.
- B. mix the cement rapidly to allow ample time for insertion.
- C. ask the patient to lightly tap on the restoration until the occlusion is comfortable.
- D. force the restoration in place with an orange wood stick and mallet.
- E. relieve the internal angles of the inlay before insertion.

Which of the following local anesthetics provide the longest duration of anesthesia?

- A. Lidocaine 2% with 1:100,000 epinephrine.
- B. Prilocaine 4% with 1:200,000 epinephrine.
- C. Bupivacaine 0.5% with 1:200,000 epinephrine.
- D. Articaine 4% with 1:100,000 epinephrine.

Which of the following is NOT a component of a dental cartridge containing 2% lidocaine with 1:100,000 epinephrine?

- A. Methylparaben.
- B. Water.
- C. Metabisulphite.
- D. Sodium chloride.

What is an early clinical manifestation of local anesthetic toxicity (overdose)?

- A. Decreased blood pressure.
- B. Lightheadedness.
- C. Vomiting.
- D. Inability to focus.

Which of the following is necessary to make a diagnosis of a keratocystic odontogenic tumour (odontogenic keratocyst)?

- A. Aspiration cytology.
- B. Exfoliative cytology.
- C. Radiographic examination alone.
- D. Histopathologic examination.

The most appropriate treatment of a true combined endodontic-periodontal lesion is

- A. periodontal surgical therapy only.
- B. nonsurgical root canal therapy only.
- C. periodontal surgical therapy before nonsurgical endodontic treatment.
- D. nonsurgical root canal therapy before periodontal therapy.

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The success of replantation of an avulsed tooth is dependent upon

- A. length of time between avulsion and replantation.
- B. completion of endodontic therapy before replantation.
- C. immersing the tooth in fluoride solution before replantation.
- D. using calcium hydroxide as a treatment root canal filling.

The canal of a maxillary canine has been instrumented to within 1mm of the apex and is ready to be obturated. A radiograph indicates that the master cone is 2.5mm short of the apex. The most appropriate management is to

- A. proceed with the filling as the cone is within acceptable limits.
- B. fit a larger cone within 2mm of the apex.
- C. cut the cone 1mm and insert.
- D. discard the cone and fit a smaller one.

Radiographic examination reveals early evidence of internal resorption. Which is the most appropriate initial management?

- A. Perform an apicoectomy.
- B. Perform a pulp extirpation.
- C. Perform a pulpotomy.
- D. Observe and re-evaluate in 3-6 months.

The orifice to the fourth canal in a permanent maxillary first molar is most often found

- A. under the distobuccal cusp.
- B. lingual to the orifice of the mesiobuccal canal.
- C. between the distobuccal and the mesiobuccal orifices.
- D. between the palatal and the distobuccal orifices.

The minimum time to wait before placing composite restorations after the completion of a bleaching (whitening) treatment is

- A. 2 hours.
- B. 2 days.
- C. 2 weeks.
- D. 2 months.

The disappearance of a calcium hydroxide liner under a restoration after a length of time is most likely a result of

- A. microleakage.
- B. gradual dissolution of the liner into the restorative material.
- C. residual bacterial action on the hydroxyl ions.
- D. incorporation into the adhesive agent.

After performing an apicoectomy, which of the following should be placed in the bony defect prior to suturing the flap?

- A. Corticosteroids.
- B. Antibiotic powder.
- C. Oxidized cellulose.
- D. Bone wax.
- E. Nothing.

The material of choice for obturating the root canal system of a primary tooth is

- A. silver cone.
- B. gutta percha.
- C. zinc-oxide eugenol.
- D. paper point medicated with formocresol.
- E. zinc oxyphosphate.

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After a thermal stimulus has been removed from a tooth persistent pain suggests

- A. a normal pulp.
- B. pulp necrosis.
- C. reversible pulpitis.
- D. irreversible pulpitis.
- E. exposed cervical dentin.

A definitive diagnosis of osteosarcoma is established by

- A. radiographic examination.
- B. clinical examination.
- C. aspiration cytology.
- D. biopsy.

A decrease in the neutrophil count is present in

- A. granulocytopenia (agranulocytosis).
- B. iron deficiency anemia.
- C. myeloid leukemia.
- D. leukocytosis.
- E. thrombocytopenic purpura.

Which of the following epithelial changes is most likely to be precancerous?

- A. Acanthosis.
- B. Hyperkeratosis.
- C. Parakeratosis.
- D. Dysplasia.

Which is a characteristic of a patient with myxedema?

- A. Exophthalmos.
- B. Weight loss.
- C. Heat intolerance.
- D. Lethargic appearance.
- E. Tachycardia.

A fracture is considered to be favourable when

- A. healing is expected to be uncomplicated.
- B. operating time will be short.
- C. fragments are not displaced by muscle pull.
- D. not exposed to the oral environment.

A characteristic of malignant tumors is the ability to

- A. invade and metastasize.
- B. grow to large size and remain within their capsule.
- C. remain localized.
- D. grow slowly.

An antipyretic drug

- A. reduces fever.
- B. provides analgesia.
- C. causes loss of consciousness.
- D. creates heat sensitivity.
- E. counters the tendency for epileptic seizures.

Histoplasmosis is a

- A. non-specific bacterial infection.
- B. protean disease.
- C. viral disease.
- D. fungal disease.

Which of the following steroids can produce Cushing's syndrome?

- A. Estradiol.
- B. Testosterone.
- C. Prednisolone.
- D. Progesterone.
- E. Diethylstilbestrol.

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In facial injury management, the most important first aid measure is to

- A. control the bleeding.
- B. prevent shock.
- C. establish and maintain an airway.
- D. control infection.

Patients with a history of rheumatic fever and known heart valve damage should be given prophylactic antibiotic coverage before dental extractions because of the risk of

- A. myocardial infarction.
- B. subacute bacterial endocarditis.
- C. cardiac arrest.
- D. All of the above.

The facial and lingual walls of the occlusal portion of a Class II cavity preparation for an amalgam in deciduous teeth should

- A. be parallel to each other.
- B. diverge toward the occlusal surface.
- C. converge toward the occlusal surface.
- D. not follow the direction of the enamel rods.

Salivary secretion

- A. increases with age.
- B. decreases with age.
- C. shows no difference with age.
- D. shows a decrease in mineral content in the elderly.

The Fluorosis Index is used to measure the

- A. degree of protection offered against dental caries by fluoride supplements.
- B. concentration of fluoride in public water supplies.
- C. degree or severity of mottled enamel.
- D. opposition to fluoridation by citizens' groups.
- E. total amount of fluoride ingested.

In a fully erupted tooth with a healthy periodontium, the apical end of the junctional epithelium is located

- A. in the cervical third of the crown.
- B. at the cemento-enamel junction.
- C. 1.5mm below the cemento-enamel junction.
- D. in the cervical third of the root.

A characteristic of the periodontium which allows safe temporary separation of the teeth is the

- A. nature of acellular cementum.
- B. elasticity of bone.
- C. modified continuous eruption of the teeth.
- D. passive eruption.

Deposition of plaque on teeth occurs in

- A. less than 24 hours.
- B. 24 to 48 hours.
- C. 2 to 4 days.
- D. 5 to 7 days.

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Following periodontal surgery, the most important factor to promote healing is

- A. a salt water rinse.
- B. thorough plaque control.
- C. gingival massage.
- D. leaving the site undisturbed for a period of 3 months.

The primary reason for placing a surgical dressing after a gingivectomy is to

- A. prevent hemorrhage.
- B. protect the wound.
- C. stabilize the teeth.
- D. protect the sutures.

The tooth surfaces LEAST susceptible to caries are

- A. mesial of the maxillary arch.
- B. lingual of the mandibular arch.
- C. distal of the maxillary arch.
- D. occlusal of the mandibular arch.
- E. lingual of the maxillary arch.

In normal gingiva, the predominant microflora of gingival plaque are

- A. gram-positive cocci.
- B. gram-negative cocci.
- C. gram-negative facultative and anaerobic rods.
- D. spirochetes.

Chronic gingival inflammation is best eliminated by

- A. gingival surgery.
- B. regular use of a water-irrigating device.
- C. root planing and curettage.
- D. occlusal correction.
- E. splinting.

The primary objective of initial periodontal therapy is to

- A. reduce occlusal trauma.
- B. make adequate dietary and nutritional adjustments.
- C. remove the colonized masses of microorganisms and calculus.
- D. eliminate crowded and tilted teeth.

Residual soft tissue interdental craters NOT associated with underlying bony changes are eliminated by

- A. root planing.
- B. subgingival curettage.
- C. flap operation.
- D. gingivoplasty.

The vertical relation of rest is

- A. the same as the vertical relation of occlusion.
- B. greater than the vertical relation of occlusion.
- C. less than the vertical relation of occlusion.
- D. the same as the interocclusal distance.

Centric relation is a

- A. relation of the maxilla to the rest of the skull.
- B. vertical relationship of the mandible to the maxilla.
- C. horizontal relationship of the mandible to the maxilla.
- D. rest position of the mandible.

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To evaluate an existing occlusion, diagnostic casts should be mounted on an articulator in

- A. centric relation.
- B. balancing occlusion.
- C. either centric relation or balancing occlusion.
- D. horizontal protrusive relation.

Which of the following is classified as a muscle of mastication?

- A. Temporalis.
- B. Buccinator.
- C. Digastric.
- D. Mylohyoid.

Which of the following bacterial types is implicated in the initiation of gingivitis?

- A. Streptococcus salivarius.
- B. Streptococcus mutans.
- C. Leptothrix buccalis.
- D. Actinomyces viscosus.

Diabetes mellitus is the result of

- A. hypersecretion of the posterior pituitary.
- B. atrophy of the islands of Langerhans.
- C. destruction of the adrenal cortex.
- D. destruction of the posterior pituitary or associated hypothalamic centres.

In cephalometric analysis of children with malocclusion, the angle ANB is frequently used. In patients with severe Class II malocclusion, this angle is

- A. greater than the normal.
- B. less than the normal.
- C. normal.

The maxilla is formed from

- A. bundle bone.
- B. endochondral bone.
- C. membranous bone.
- D. lamellar bone.

Which of the following patients has the POOREST prognosis when placing dental implants? A patient who

- A. is over age 80 years old.
- B. is on thyroid replacement therapy.
- C. smokes 2 packs of cigarettes daily.
- D. has generalized osteoporosis.

Which of the following procedures is NOT indicated for the management of infrabony defects?

- A. Gingivectomy.
- B. Regenerative surgery.
- C. Flap surgery.
- D. Gingival graft.

Enameloplasty can be used when

- A. caries has reached the DEJ.
- B. caries is detected radiographically.
- C. the pit or groove is less than full enamel thickness.
- D. the pit or groove is the full enamel thickness.

Which disease could cause both renal and cardiac complications?

- A. Measles.
- B. Scarlet fever.
- C. Rubella.
- D. Rosacea.

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Which of the following is the most frequent major congenital malformation of the head and neck?

- A. Cystic hygroma colli.
- B. Cleft palate.
- C. Encephalotrigeminal angiomas.
- D. Double lip.
- E. Commissural pits.

Smooth surface caries begins at localized areas on the

- A. outer surface of enamel and dentin.
- B. inner surface of the enamel.
- C. outer surface of the dentin.
- D. outer surface of the enamel.
- E. inner surface of the dentin.

A periodontal dressing is placed following a gingivectomy to:

- A. Promote wound healing.
- B. prevent microbial colonization of the wound.
- C. protect the wound from mechanical injury.
- D. achieve hemostasis.

The parasympathetic post ganglionic fibers leaving the otic ganglion will travel along which cranial nerve?

- A. Glossopharyngeal.
- B. Branch of the mandibular.
- C. Temporal.
- D. Facial.

Which of the following would maximize vitamin E intake following osseous surgery?

- A. Lettuce.
- B. Wheat germ.
- C. Eggs.
- D. Fish.

Which of the following procedures must be done to ensure acceptable mercury hygiene in a dental office?

- A. Use of high volume evacuation when working with amalgam.
- B. Use of air spray when condensing, polishing or removing amalgam.
- C. Storage of amalgam scrap in a dry container with a lid.
- D. A quarterly mercury assessment for office personnel.

Oral lesions that do NOT cross the midline are most likely

- A. herpes zoster.
- B. varicella.
- C. an allergic response.
- D. recurrent herpes.

A 32 year old female patient complains of fever, weight loss and general malaise. She has a rash on the malar area and nose, as well as some irregularly shaped ulcerations on the buccal mucosa. The most likely diagnosis is

- A. lichen planus.
- B. lupus erythematosus.
- C. erythema multiforme.
- D. bullous pemphigoid.
- E. pemphigus.

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A 22 year old patient has been experiencing general malaise, fever, sore throat and coughing for one week. There are multiple ulcerations of the oral mucosa, crusting of the lips and red circular lesions on the palms of the hands. The most likely diagnosis is

- A. gonorrhea.
- B. infectious mononucleosis.
- C. acute herpetic gingivostomatitis.
- D. AIDS.
- E. erythema multiforme.

A 24 year old patient complains of abdominal pain, frequent diarrhea and weight loss. The oral clinical examination shows linear mucosal ulcers with hyperplastic margins in the buccal vestibule. What is the most likely diagnosis?

- A. Crohn's disease.
- B. Leukemia.
- C. AIDS.
- D. Diabetes mellitus.

Decreased alveolar bone density is associated with decreased levels of

- A. thyroxin.
- B. hydrocortisone.
- C. parathyroid hormone.
- D. estrogen.

By definition, a compound fracture of the mandible must have

- A. multiple bone fragments.
- B. exposure to the external environment.
- C. a tooth in the line of fracture.
- D. displacement of the fractured segments.

Yellow or brown stains appearing on radiographs months after processing result from

- A. processing at an excessive temperature.
- B. storing radiographs at 30°C.
- C. incomplete fixing and/or washing of radiographs.
- D. using expired film.

One function of the striated ducts in the parotid and submandibular glands is to

- A. add Na<sup>+</sup> ions to saliva.
- B. help form a hypertonic saliva ( relative to serum ).
- C. add bicarbonate ions to saliva.
- D. remove K<sup>+</sup> ions from saliva.
- E. add salivary amylase to saliva.

A 7 year old patient is missing tooth 5.5 and tooth 7.5. Space maintainers were not placed. A current mixed dentition analysis yields the following data:

R	L
-5mm	-3mm
-3mm	-4.5mm

The actual space loss is

- A. 8mm in the maxilla.
- B. 2mm in the maxilla.
- C. 7.5mm in the mandible.
- D. 4.5mm in the mandible.

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The physical properties of alginate impression materials will be adversely affected by

- A. "tumbling" the alginate container prior to filling the dispensing scoop.
- B. adding powder to the water in the mixing bowl.
- C. using room temperature water.
- D. mixing beyond the recommended time.

The primary use of nitrous oxide and oxygen in dentistry today is as a(n)

- A. substitute agent for local anesthesia.
- B. general anesthetic agent.
- C. agent for conscious sedation.
- D. agent for the management of chronic obstructive pulmonary disease.

In periodontal flap surgery, the initial incision is made to

- A. expose the sulcular lining of the pocket.
- B. aid in healing.
- C. sever the attachment of the oblique fibres of the periodontal ligament.
- D. excise the keratinized gingiva.

Which has the WORST prognosis?

- A. Occlusal traumatism.
- B. Gingivitis.
- C. Aggressive periodontitis.
- D. Periodontal atrophy.
- E. Chronic periodontitis.

A patient fails to demonstrate effective plaque control during initial periodontal therapy for moderate periodontitis. The most appropriate management is

- A. continued initial therapy.
- B. gingival curettage.
- C. gingivectomy.
- D. an apically positioned flap.

Guided tissue regeneration surgery selectively promotes the growth of all of the following EXCEPT

- A. epithelial cells
- B. endothelial cells.
- C. osteoblasts.
- D. cementoblasts.

Which of the following is NOT a sign of occlusal trauma?

- A. Fremitus.
- B. Gingival recession.
- C. Widened periodontal ligament.
- D. Tooth migration.

Absence of occlusal contacts on a provisional restoration may result in the definitive restoration exhibiting

- A. heavy occlusal contact.
- B. no occlusal contact.
- C. tight proximal contacts.
- D. open proximal contacts.

High telomerase activity is associated with

- A. diabetes mellitus.
- B. malignant tumours.
- C. hyperthyroidism.
- D. cystic fibrosis.

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A drug that affects alkaline phosphatase activity would target

- A. muscles and bones.
- B. skin and teeth.
- C. bones and teeth.
- D. muscles and skin.

Enamel spindles are

- A. aberrant dentinal tubules that cross the dentinoenamel junction.
- B. structural faults that span the entire thickness of the enamel.
- C. responsible for the incremental lines in enamel.
- D. seen as perikymata on the surface of newly erupted teeth.

A gluteal intramuscular injection may be safely administered in which quadrant?

- A. Lower medial.
- B. Upper medial.
- C. Lower lateral.
- D. Upper lateral.

Which of the following is NOT correlated to early implant failure?

- A. Age of the patient.
- B. Type III/IV bone around the implant.
- C. Poorly controlled diabetes.
- D. Regular smoking habit.

The pterygomaxillary fissure is formed by the maxilla and which other bone?

- A. Temporal.
- B. Sphenoid.
- C. Frontal.
- D. Occipital.

The pulpal floor of an occlusal amalgam preparation on a mandibular first premolar should slope apically from

- A. mesial to distal.
- B. buccal to lingual.
- C. distal to mesial.
- D. lingual to buccal.

A 29 year old patient has had multiple painful ulcerated lesions on the buccal attached gingiva for one day. No fever, malaise or lymphadenopathy is present. The most appropriate initial management is (a)

- A. topical steroid.
- B. palliative mouth rinse.
- C. systemic antibiotic.
- D. systemic antiviral therapy.

Which of the following is a reason to perform initial periodontal debridement before periodontal surgery?

- A. Increase the attachment levels.
- B. Reduce infrabony pockets.
- C. Reduce bleeding during the surgery.
- D. Increase the width of keratinized tissue.

The periodontal ligament

- A. only has oblique fibres during the eruptive stage.
- B. increases in width with age.
- C. achieves its final structural form after complete eruption.
- D. has osteoblasts as its principle cells.

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A smooth surface coronal white spot carious lesion that is visible when the tooth is both wet and dry indicates that the

- A. lesion is less than halfway through the enamel.
- B. enamel is stained and not demineralized.
- C. lesion is more than halfway through the enamel.
- D. caries involves the inner half of the dentin.

Which microorganism does NOT contribute significantly to the progression of dentinal caries?

- A. *Actinomyces naeslundii*.
- B. *Lactobacillus casei*.
- C. *Actinomyces viscosus*.
- D. *Streptococcus salivarius*.

A 47 year old female patient complains of a “burning sensation” of the tongue. Examination reveals angular cheilitis and a smooth redness on the entire dorsal surface of the tongue. The most likely diagnosis is

- A. anemia.
- B. epithelial dysplasia.
- C. squamous cell carcinoma.
- D. primary herpes.
- E. median rhomboid glossitis.

What is the threshold count of *S. mutans* in mixed saliva at which a patient is deemed “high risk” for caries?

- A. 100/ml.
- B. 10,000/ml.
- C. 1,000,000/ml.
- D. 100,000,000/ml.

The form of hepatitis that poses the greatest risk of transmission from patient to dental health care worker is

- A. hepatitis A.
- B. hepatitis B.
- C. hepatitis C.
- D. hepatitis D.

The risk of a health care worker contracting hepatitis B through a needlestick injury from a chronic hepatitis B carrier is increased when the patient’s serology report indicates the presence of

- A. HBsAg.
- B. anti-HBcAg.
- C. HBeAg.
- D. anti-HBsAg.

A 20 year old male presents with a three-day history of an acute generalized gingivitis. He has malaise, fever and bilateral cervical lymphadenopathy. A blood examination reveals

Hb: 8.9g/100ml  
Platelets: 82,000/mm<sup>3</sup>  
Red blood cell count: 3,900,000/mm<sup>3</sup>  
White blood cell count: 870,000/mm<sup>3</sup>

Normal Values:

Hb: 14-18g/100ml  
Platelets: 150,000-400,000/mm<sup>3</sup>  
Red blood cell count: 4-5million/mm<sup>3</sup>  
White blood cell count: 5,000-10,000/mm<sup>3</sup>

The most likely diagnosis is

- A. thrombocytopenic purpura.
- B. acute myelogenous leukemia.
- C. infectious mononucleosis.
- D. necrotizing ulcerative gingivitis.

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An incipient lesion on an interproximal surface is usually located

- A. at the contact area.
- B. facial to the contact area.
- C. lingual to the contact area.
- D. gingival to the contact area.
- E. occlusal to the contact area.

The tooth preparation for a porcelain veneer must have a/an

- A. incisal reduction of 0.5mm.
- B. space for the veneer material.
- C. margin at least 1mm supragingivally.
- D. butt joint gingival margin.

During the pharyngeal phase of swallowing, motor neurons in the swallowing center are activated to

- A. open the lower esophageal sphincter.
- B. inhibit respiration.
- C. initiate the secondary peristaltic wave.
- D. open the palatopharyngeal folds.

Which of the following statements about the nutritional management of diabetes is correct?

- A. A diet planned according to Canada's Food Guide to Healthy Eating must be modified for a person with diabetes.
- B. The Glycemic Index of foods should be used when planning the diet.
- C. The fat content of the diet should be 30-35% of energy intake.
- D. Sucrose up to 10% of total daily energy intake (e.g. 50% of 2000 kcal/day) is acceptable.

The most common sensory change in the healthy elderly is a decrease in

- A. hearing.
- B. taste.
- C. touch perception.
- D. olfaction.

Which of the following conditions is managed by the administration of bisphosphonates?

- A. Osteoarthritis.
- B. Osteopetrosis.
- C. Osteoporosis.
- D. Osteomyelitis.

The most common senile dementia in the elderly is

- A. vascular dementia.
- B. Alzheimer's disease.
- C. a result of cerebral arteriosclerosis.
- D. multi-infarct dementia.

In addition to iron, calcium and folate, which of the following nutrients is of special concern during pregnancy?

- A. Vitamin B<sub>12</sub>.
- B. Pyridoxine.
- C. Vitamin D.
- D. Ascorbic acid.

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An adult female patient presents to the dental office with fractured teeth, a lacerated lip and a black eye. She is with her 6 year old son, who is crying and upset. The dentist's receptionist discretely reports that the child was asking his mother "Why was Daddy hurting you?" Upon questioning, the patient confides that her husband was the source of her injuries and indicates that she would not be pursuing any action. She is referred to a specialist due to the complexity of her dental injuries, but she requests that the source of her injuries not be disclosed. What is the dentist's obligation?

- A. Respect the patient's request regarding confidentiality.
- B. Report her injuries to an adult protection agency.
- C. Forward all information, including the source of the injuries, to the specialist.
- D. Report the situation to a relevant child protection agency.

Which anatomical structures form the inverted Y (Y line) in maxillary periapical radiographs?

- A. Nasopalatine/incisive canal and floor of the nasal fossa.
- B. Anterior nasal spine and nasopalatine/incisive canal.
- C. Floor of the nasal fossa and maxillary sinus border.
- D. Zygomatic process of the maxilla and maxillary sinus border.

A patient complains of fatigue, abdominal pain and lack of appetite. The clinical examination shows that the sclera of the eyes are yellow. There is also a yellowish diffuse discolouration of the oral mucosa. What is the most likely diagnosis?

- A. Viral hepatitis.
- B. Iron deficiency anemia.
- C. Hypercarotenemia.
- D. Thrombocytopenic purpura.

The greatest cariogenic potential is exhibited by

- A. cheese.
- B. apples.
- C. chewing gum.
- D. raisins.

The proximal surfaces of two adjacent teeth in contact form the borders of the

- A. interdental space.
- B. embrasures.
- C. interdental col.
- D. line angles.

A smooth-surface proximal carious lesion

- A. initially begins as an enamel defect in the contact area.
- B. in enamel, can be depicted as a cone with the apex of the cone at the dentino-enamel junction.
- C. in enamel, can be depicted as a cone with the base of the cone at the dentino-enamel junction.
- D. initially begins as a subgingival enamel defect covered with plaque.

Which of the following is the most appropriate indication for resective osseous periodontal surgery?

- A. Advanced attachment loss.
- B. Class III furcation defect.
- C. Inadequate clinical crown length.
- D. Vertical root fracture.

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Compared to a full thickness flap, a partial-thickness (split-thickness) flap will

- A. increase the loss of marginal bone.
- B. reduce infraosseous defects.
- C. provide improved surgical access.
- D. increase the amount of attached gingiva.
- E. reduce healing time.

After the elimination of occlusal trauma, even in the presence of inflammation, which of the following is most likely to result?

- A. Reduction in tooth mobility.
- B. Regeneration of the periodontal ligament.
- C. Restoration of lost alveolar bone.
- D. Gain of clinical attachment.

Which tooth has the best prognosis in a patient with generalized periodontal disease?

- A. 1.1.
- B. 1.3.
- C. 1.4.
- D. 1.6.

During guided tissue regeneration therapy, the regenerative cells originate primarily from the

- A. lamina propria.
- B. periodontal ligament.
- C. cellular cementum.
- D. collagen membrane.

Which of the following statements is true regarding local anesthetic syringes and needles for dental anesthesia?

- A. Bending a needle is an acceptable practice for injections when the needle is inserted more than 5mm into soft tissue.
- B. To avoid percutaneous injury, needles may be left uncapped away from the working area after use.
- C. A new anesthetic needle should be used when the elapsed time between multiple injections is more than 30 minutes.
- D. Needles should be recapped after use, using a scoop method or mechanical device.

If post-exposure prophylaxis is recommended following a significant percutaneous injury from an HIV-positive patient, the antiviral drugs should ideally be administered within

- A. 1-2 hours of the injury.
- B. 1-2 days of the injury.
- C. 2 weeks of the injury.
- D. 4 weeks of the injury.

The most appropriate indication for double gloving is

- A. patient-specific.
- B. for a procedure on a patient with AIDS.
- C. procedure-specific.
- D. for a procedure that requires a high degree of tactile sensitivity.

Which is the LEAST common type of adverse reaction associated with the use of latex gloves?

- A. Immediate type I allergic reaction.
- B. Delayed hypersensitivity.
- C. Type IV immunologic reaction.
- D. Irritant contact dermatitis.

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Of the following structures, which would be projected closest to the occlusal plane when taking a mandibular posterior periapical radiograph?

- A. External oblique ridge.
- B. Mandibular canal.
- C. Submandibular salivary gland fossa.
- D. Mental foramen.

Which of the following statements regarding Informed Consent is FALSE? It is

- A. always necessary.
- B. given only by the person receiving the treatment.
- C. able to be withdrawn.
- D. procedure specific.

Which is the most appropriate method to minimize loss of dental amalgam and mercury from dental offices into sewage systems?

- A. Use of ISO approved amalgam separators.
- B. Storage of amalgam capsules in sealed containers.
- C. Use of mercury vapour scavengers.
- D. Disposal of scrap amalgam in a landfill site.

Polyether impression materials should be used with caution for full arch impressions of dentate patients because they

- A. exhibit viscoelasticity.
- B. exhibit a high elastic modulus.
- C. are thixotropic.
- D. are hydrophilic.
- E. are exothermic.

In the pterygomandibular space, the inferior alveolar nerve passes

- A. anterior to the deep tendon of the temporal muscle.
- B. lateral to the sphenomandibular ligament.
- C. medial to the medial pterygoid muscle.
- D. medial to the pterygomandibular raphe.

Which of the following is the most characteristic gingival feature of agranulocytosis?

- A. Hematoma.
- B. Ulceration.
- C. Erythema.
- D. Fibromatosis.

During the intravenous administration of diazepam, which of the following arteries may accidentally be entered in the antecubital fossa?

- A. Ulnar.
- B. Radial.
- C. Brachial.
- D. Deep brachial.
- E. Radial recurrent.

Which of the following statements concerning root canals and their foramina is NOT true?

- A. Root canals bifurcate and have dual foramina.
- B. The major foramen is precisely at the apex of the tooth.
- C. The root canals may join and have a single foramen.
- D. The dentino-cemental junction is precisely at the apex of the tooth.
- E. A cross section of the canal in the apical region is relatively round.

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The initial histological appearance of a successful apicectomy would show on a radiograph as

- A. a radiolucent area.
- B. woven bone.
- C. cortical bone around surgical site.
- D. sclerotic dentin.

Premature eruption of primary teeth is associated with

- A. congenital gingival fibromatosis.
- B. congenital hypothyroidism.
- C. osteopetrosis.
- D. cleidocranial dysplasia.
- E. juvenile hyperthyroidism.

The primary muscle of the cheek is the

- A. orbicularis oris.
- B. masseter.
- C. zygomaticus major.
- D. buccinator.

Pernicious anemia may cause

- A. glossitis.
- B. lingual ulceration(s).
- C. parotid swelling.
- D. gastric hyperacidity.

The most likely diagnosis of a patient with pain, swelling, numbness of the jaw and unexplained tooth mobility is

- A. hyperparathyroidism.
- B. fibrous dysplasia.
- C. malignant neoplasm.
- D. giant cell reparative granuloma.
- E. syphilis.

The earliest radiographic sign of traumatic occlusion is

- A. hypercementosis.
- B. root resorption.
- C. alteration of the lamina dura.
- D. widening of the periodontal ligament space.
- E. ankylosis.

Coxsackie A virus is the etiologic agent in

- A. thrush.
- B. herpangina.
- C. lichen planus.
- D. aphthous stomatitis.

Inclusion bodies in the nucleus or cytoplasm of cells are diagnostic of

- A. rickettsia.
- B. parasitic infestations.
- C. bacterial diseases.
- D. viral diseases.

Which of the following can result in post-developmental jaw growth?

- A. Hyperparathyroidism.
- B. Hyperthyroidism.
- C. Adult hypothyroidism.
- D. Osteitis deformans (Paget's).
- E. Hypoparathyroidism.

Blue sclera is characteristic of

- A. osteopetrosis.
- B. osteogenesis imperfecta.
- C. osteitis deformans.
- D. fibrous dysplasia.

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The characteristic pain of trigeminal neuralgia is

- A. dull and prolonged.
- B. infrequent, sharp and prolonged.
- C. regularly recurrent, dull and persistent.
- D. annoying but controlled with salicylates.
- E. sharp, stabbing and excruciating.

Chlorpromazine produces all of the following EXCEPT

- A. photosensitivity.
- B. excessive salivation.
- C. anticholinergic effects.
- D. antiadrenergic effects.

Which of the following is NOT a sign of congenital heart disease?

- A. Cyanosis.
- B. Telangiectasia.
- C. Clubbing of the fingers and toes.
- D. Heart murmur.
- E. Right ventricular hypertrophy.

Which of the following drugs potentiates the action of sedative drugs?

- A. Digitalis.
- B. Phenothiazine.
- C. Propranolol.
- D. Methyldopa.
- E. Spironolactone.

Which of the following conditions may develop as a result of juvenile diabetes mellitus?

- A. Ataxia.
- B. Aphasia.
- C. Deafness.
- D. Blindness.
- E. Motor paralysis.

The most appropriate management of a maxillary central incisor in crossbite in a 7 year old is

- A. monitor until eruption of all permanent teeth.
- B. immediate orthodontic correction.
- C. immediate orthodontic correction only with sufficient overbite.
- D. serial extraction.

In the initiation of dental caries, lactobacilli are

- A. capable of surviving without nutrients.
- B. abundant in calculus.
- C. both acidogenic and aciduric.
- D. the only acid-forming bacteria in the mouth.

A magenta-coloured tongue and angular cheilitis may be associated with a deficiency of

- A. ascorbic acid.
- B. niacin.
- C. riboflavin.
- D. thiamine.

In necrotizing ulcerative gingivitis the deepest penetrating microorganisms are

- A. cocci.
- B. spirochetes.
- C. diplococci.
- D. filamentous rods.

Ultrasonic scalers are most effective in

- A. removal of supragingival calculus.
- B. removal of subgingival calculus.
- C. removal of toxins from cementum.
- D. planing root surfaces.

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Streptococcus mutans colonizes

- A. cusp surfaces of teeth.
- B. pits and fissures of teeth.
- C. on the tongue.
- D. at pH of 2.5.

Characteristics of Peutz-Jeghers syndrome include

- A. melanin pigmentation of the lips.
- B. yellowish spots on the oral mucosa.
- C. small, papillary lesions on the palate.
- D. a rhomboid-shaped red patch on the dorsum of the tongue.

It is advisable to polish any restorative material as smoothly as possible in order to prevent

- A. microleakage.
- B. accumulation of plaque.
- C. overhanging margins.
- D. electro-chemical action.

A bacterial enzyme capable of altering the ground substance of the periodontal ligament is

- A. amylase.
- B. hyaluronidase.
- C. dextranase.
- D. streptokinase.

Initial scaling and oral hygiene instruction in the treatment of periodontitis results in all of the following EXCEPT

- A. pocket shrinkage.
- B. decreased hemorrhage during surgery.
- C. evaluation of the patient's motivation.
- D. improved healing after surgery.
- E. correction of pathological migration of teeth.

The most damaging characteristic of an Angle Class II, division 2 malocclusion is the

- A. deep overbite.
- B. crowding of the mandibular incisors.
- C. relationship of the molars.
- D. impaction of the maxillary canines.
- E. malposition of the maxillary lateral incisors.

A 30 year old HIV positive patient presents for the removal of an abscessed second molar. The most appropriate management is to

- A. refer to another dentist because universal infection control procedures are insufficient.
- B. schedule appointments at the end of the day.
- C. treat the patient in the same way as all other patients.
- D. double glove before starting any surgical procedures.

A patient must push up on his mandible to close his mouth. The most likely cause is

- A. Bell's palsy.
- B. muscular dystrophy.
- C. multiple sclerosis.
- D. necrotizing fasciitis.
- E. myasthenia gravis.

In a healthy patient whose chief complaint is bleeding gums after tooth brushing, what is the most appropriate initial management?

- A. Elimination of local plaque retention sites.
- B. Dietary analysis.
- C. Periodontal examination and recording.
- D. Occlusal examination and recording.

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A patient complains of lip and tongue hypersensitivity (allodynea) following intake of hot, spicy food. The sensory nerve fibers that are associated with this form of pain are

- A. A-alpha.
- B. A-beta.
- C. A-gamma.
- D. A-delta and C.

The most likely cause of a cavernous sinus thrombosis is a periradicular abscess of a maxillary

- A. first molar.
- B. central incisor.
- C. second premolar.
- D. third molar.

Which of the following is the most powerful jaw-closing muscle?

- A. Temporalis.
- B. Lateral pterygoid.
- C. Masseter.
- D. Medial pterygoid.

A bacterial infection causes the most significant increase in

- A. basophils.
- B. neutrophils.
- C. lymphocytes.
- D. monocytes.
- E. eosinophils.

Which of the following Class II Division 1 malocclusion(s) is/are most likely to be corrected with a cervical headgear?

- A. Retrognathic mandible, retrognathic maxilla, open bite.
- B. Prognathic maxilla, decreased lower face height, increased over bite.
- C. Increased lower anterior face height, prognathic mandible, retrognathic maxilla.
- D. Open bite, prognathic maxilla, prognathic mandible.

A 52 year old patient presents with a limitation of mouth opening. The patient has loss of attached gingiva and multiple areas of gingival recession. A panoramic radiograph shows diffuse widening of the periodontal ligament. The most likely diagnosis is

- A. scleroderma.
- B. hyperparathyroidism.
- C. cicatricial pemphigoid.
- D. erythema multiforme.
- E. advanced adult periodontitis.

The inorganic ion which is the chief offender in hypertension is

- A. sodium.
- B. ammonium.
- C. magnesium.
- D. potassium.

An advantage of glass ionomer cement is

- A. low solubility.
- B. wear resistance.
- C. adhesion to hard tooth tissues.
- D. low incidence of sensitivity.

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In alginate impression materials, sodium phosphate ( $\text{Na}_3\text{PO}_4$ ) is the

- A. reactor.
- B. catalyst.
- C. retarder.
- D. disinfectant.
- E. cross linking agent.

During the setting phase, a dental stone mixture will exhibit

- A. expansion.
- B. contraction.
- C. loss in compressive strength.
- D. gain in moisture content.

The predominant cells in the inflammatory exudate of an acute periodontal abscess are

- A. neutrophils.
- B. eosinophils.
- C. basophils.
- D. lymphocytes.
- E. monocytes.

Which condition is associated with elevated serum alkaline phosphatase and elevated urinary hydroxyproline levels?

- A. fibrous dysplasia.
- B. Paget's disease.
- C. Sjögren's syndrome.
- D. Gardner's syndrome.

A 65 year old patient has a tendency for urinary tract stones. Radiographic examination shows generalized loss of the lamina dura and a "ground glass" appearance of the bone. What is the most likely diagnosis?

- A. Hyperthyroidism.
- B. Addison's disease.
- C. Hypothyroidism.
- D. Hyperparathyroidism.
- E. Hypoparathyroidism.

Gingivectomy is recommended

- A. when the bottom of the pocket is apical to the mucogingival junction.
- B. to eliminate the suprabony pockets when the pocket wall is fibrous and firm.
- C. to treat moderately deep pockets with mild intrabony defects.

Which of the following treatments is CONTRAINDICATED for a patient with necrotizing ulcerative gingivitis?

- A. Antibiotic therapy.
- B. Local debridement.
- C. Topical steroid therapy.
- D. Warm saline solution rinses.

Which of the following medications does NOT cause gingival hyperplasia?

- A. Cyclosporine.
- B. Nifedipine.
- C. Phenytoin.
- D. Carbamazepine.

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Which of the following types of bone contain the insertions of the periodontal ligament fibres?

- A. Woven.
- B. Bundle.
- C. Lamellar.
- D. Cortical.

Type I hypersensitivity results from cross-linking of which immunoglobulin on mast cells?

- A. IgA.
- B. IgD.
- C. IgE.
- D. IgG.
- E. IgM.

Which mucogingival surgical procedure does NOT increase the zone of attached gingiva?

- A. Free autogenous gingival graft.
- B. Laterally positioned flap.
- C. Coronally positioned flap.
- D. Subepithelial connective tissue graft for root coverage.

Acquired immunodeficiency syndrome (AIDS) is caused by a/an

- A. adenovirus.
- B. retrovirus.
- C. picovirus.
- D. coronavirus.

Which statement best describes hand washing for the prevention of disease transmission?

- A. Hands should be washed for at least 15 seconds, always with an antimicrobial soap.
- B. Hands should be washed thoroughly and vigorously prior to placement and upon removal of gloves.
- C. Transient flora is more difficult to remove during routine hand washing and needs vigorous scrubbing action.
- D. An alcohol hand rub is an acceptable alternative to hand washing.

Which muscle is primarily responsible for moving the mandible to a lateral position?

- A. Masseter.
- B. Lateral pterygoid.
- C. Medial pterygoid.
- D. Buccinator.
- E. Temporalis.

A high neutrophil count is indicative of a/an

- A. allergic reaction.
- B. bacterial infection.
- C. blood clotting defect.
- D. decrease in antibody production.

A 52 year old patient presents with restricted or limited mouth opening. The patient has loss of attached gingiva and multiple areas of gingival recession and tight skin. A panoramic radiograph shows diffuse widening of the periodontal ligament. What is the most likely diagnosis?

- A. Progressive systemic sclerosis.
- B. Hyperparathyroidism.
- C. Cicatricial pemphigoid.
- D. Erythema multiforme.
- E. Advanced adult periodontitis.

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When a second canal is located in mandibular incisors, it is most frequently found

- A. labial to the main canal.
- B. lingual to the main canal.
- C. mesial to the main canal.
- D. distal to the main canal.

The permanent anterior tooth that exhibits the greatest variation in size and shape is the

- A. maxillary central incisor.
- B. maxillary lateral incisor.
- C. mandibular central incisor.
- D. mandibular lateral incisor.

The predominant immunoglobulin isolated from saliva is

- A. IgG.
- B. IgM.
- C. IgA.
- D. IgD.

Tooth 3.3 has a 9mm probing depth with a 6mm three-wall infrabony mesial defect. It tests vital and is not mobile. Which of the following is the most appropriate treatment?

- A. Gingival curettage.
- B. Modified Widman flap.
- C. Osseous resective surgery.
- D. Guided tissue regeneration.

Generalized enlarged fibrotic interdental papillae of 2 months duration are interfering with orthodontic treatment. There is no evidence of attachment loss. Scaling and root planing have not resolved the condition. Which of the following is the most appropriate intervention?

- A. Gingival curettage.
- B. Gingivoplasty.
- C. Osseous resective surgery.
- D. Guided tissue regeneration.

In gingivitis, the initial cellular immune response predominantly involves

- A. T lymphocytes.
- B. B lymphocytes.
- C. neutrophils.
- D. plasma cells.

In a patient with an adequate band of keratinized tissue, gingivectomy is indicated for all EXCEPT

- A. gingival pockets.
- B. suprabony pockets.
- C. gingival overgrowths.
- D. infrabony pockets.

Following periodontal debridement, reduction in pocket depth is primarily due to

- A. decreased inflammation.
- B. reattachment of gingival fibers.
- C. epithelial "adhesion" to the tooth.
- D. connective tissue regeneration.

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The re-evaluation of periodontal debridement effectiveness after 4 to 6 weeks is best assessed by examining clinical attachment levels and

- A. radiographic bone density.
- B. plaque index.
- C. bleeding index.
- D. mobility.

Clinical management of gingival enlargement caused by Phenytoin (Dilantin®) therapy includes

- A. the use of analgesics to control pain.
- B. withdrawal of the medication.
- C. extraction of the teeth.
- D. gingivectomy and maintenance of good oral hygiene.
- E. a mouth guard to control mouth breathing.

Which of the following conditions CONTRAINDICATES treatment with dental implants?

- A. Uncontrolled diabetes mellitus.
- B. Osteoporosis.
- C. Anticoagulant therapy.
- D. Age greater than 80 years.

Changes in direction of groups of enamel prisms

- A. have no functional importance.
- B. result from incremental growth.
- C. make enamel resistant to fracture.
- D. extend to the enamel surface.

The earliest colonizers of dental plaque are

- A. Gram-positive rods.
- B. Gram-positive cocci.
- C. Gram-negative rods.
- D. Gram-negative cocci.

Which microorganism does NOT contribute significantly to the progression of dental caries?

- A. Actinomyces naeslundii.
- B. Lactobacillus casei.
- C. Actinomyces viscosus.
- D. Streptococcus salivarius.

A functional parathyroid adenoma would most likely result in

- A. generalized loss of lamina dura.
- B. nervousness, exophthalmos and heat intolerance.
- C. an increased caries rate.
- D. multiple recurrent periodontal abscesses.

Which part of the brain is NOT primarily involved in motor control?

- A. Cerebellum.
- B. Basal ganglia.
- C. Occipital lobe.
- D. Frontal lobe.

Which of the following lesions of the oral or maxillofacial region is premalignant?

- A. Ectodermal dysplasia.
- B. Focal fibrous hyperplasia.
- C. Smoker's melanosis.
- D. Fibrous dysplasia.
- E. Epithelial dysplasia.

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A patient diagnosed with multiple mucosal neuromas should be further evaluated for the possibility of

- A. premalignant adenomatous polyposis coli.
- B. hamartomatous polyps of the small intestine.
- C. congenitally missing first premolars.
- D. multiple palmar or facial basal cell carcinomas.
- E. neoplasms of endocrine organs.

The presence of more than  $10^4$  copies/mL of hepatitis B DNA in blood is indicative of

- A. a past exposure to hepatitis B with immunity.
- B. recovery from hepatitis B with liver damage.
- C. a highly infectious individual.
- D. an inconclusive immune status.

What is the most likely diagnosis of a white, diffuse, wrinkled appearing lesion of the buccal mucosa which diminishes in prominence or disappears upon stretching?

- A. Leukoedema.
- B. Lichen planus.
- C. Candidiasis.
- D. Linea alba.
- E. White sponge nevus.

Which of the following restorations is the most appropriate for a primary molar with 3 or more carious surfaces in a high caries-risk child?

- A. Bonded amalgam.
- B. Composite resin.
- C. Stainless steel crown.
- D. Resin modified glass ionomer cement.

For a patient who exhibits bruxism, a cast gold inlay is superior to an amalgam because the inlay has

- A. better adaptation to the cavity walls.
- B. greater thermal conductivity.
- C. better ability to withstand masticatory forces.
- D. easier placement into the cavity preparation.

In an Angle's Class I occlusion, the cusp of which permanent tooth is in contact with the central fossa of the mandibular first molar?

- A. Mesiolingual cusp of the maxillary first molar.
- B. Distolingual cusp of the maxillary first molar.
- C. Mesiolingual cusp of the maxillary second molar.
- D. Distolingual cusp of the maxillary second molar.

In an Angle Class I occlusion, which cusp of which permanent tooth moves between the mesiolingual and distolingual cusps of the mandibular second molar in a working side movement?

- A. Mesiolingual cusp of the maxillary first molar.
- B. Distolingual cusp of the maxillary first molar.
- C. Mesiolingual cusp of the maxillary second molar.
- D. Distolingual cusp of the maxillary second molar.

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In determining the ideal proximal outline form for a Class II amalgam cavity preparation in a molar the

- A. axial wall should be 1.5mm deep.
- B. gingival cavosurface margin must be placed supragingivally.
- C. proximal walls diverge occlusally.
- D. facial and lingual proximal cavosurface margins must just clear contact with the adjacent tooth.

A laboratory remount of processed dentures is done in order to correct occlusal disharmony produced by errors primarily in the

- A. mounting of the casts on the articulator.
- B. registration of jaw relation records.
- C. processing of acrylic.
- D. setting of condylar guidance.

There is a difference between girls and boys with respect to the age at which the growth velocity reaches its peak.

- A. Boys are six months ahead of girls.
- B. Girls are six months ahead of boys.
- C. Girls are one year ahead of boys.
- D. Girls are two years ahead of boys.

In pediatric patients

- A. asthma has a decreasing prevalence.
- B. asthma is an acute inflammatory disorder.
- C. asthma leads to increased caries.
- D. asthmatic attacks can be triggered by anxiety.

Bone loss at menopause accelerates because estrogens

- A. are necessary for calcium absorption from the small intestine.
- B. inhibit bone resorbing cytokine synthesis.
- C. inhibit osteoblast activity.
- D. promote osteoclast proliferation and differentiation.

Low serum levels of parathyroid hormone and vitamin D combined with low bone mass in the skeleton are consistent with the diagnosis of

- A. hypoparathyroidism.
- B. hypothyroidism.
- C. dietary calcium deficiency.
- D. postmenopausal osteoporosis.

A chronic alcohol abuser has just been diagnosed with Wernicke-Korsakoff's syndrome. He complains of pain and burning mouth and presents with angular cheilitis and glossitis. He is suffering from a severe deficiency of

- A. vitamin A.
- B. ascorbic acid.
- C. vitamin K.
- D. thiamin.

The most common form of latex allergy is a/an

- A. immediate localized (Type 1) contact urticaria and erythema.
- B. immediate generalized (Type 1) conjunctivitis and rhinitis.
- C. immediate generalized (Type 1) bronchospasm and anaphylaxis.
- D. delayed (Type IV) contact dermatitis.

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Which patient would NOT be predisposed to liver toxicity following a dose of 1000mg of acetaminophen?

- A. An adult with liver cirrhosis.
- B. A chronic alcoholic.
- C. A diabetic.
- D. A 15kg, 4 year old child.

Which clinical sign indicates palatal impaction of the permanent maxillary canines?

- A. Buccally positioned first premolars.
- B. Early exfoliation of primary canines.
- C. Midline central diastema.
- D. Lack of canine labial bulges in a 10 year old patient.

An HIV-positive patient has white lesions on the buccal mucosa. The lesions can be wiped off to reveal an erythematous base. The lesions are most likely caused by

- A. Streptococcus viridans.
- B. Epstein-Barr virus.
- C. Candida albicans.
- D. Straphylococcus aureus.

The most appropriate procedure when a glove has been punctured during a restorative appointment is to

- A. wash the gloved hands using antimicrobial soap and complete the procedure.
- B. change the glove as soon as possible.
- C. put on an overglove and complete the procedure.
- D. complete the procedure as expeditiously as possible.

What type of insurance must a dentist carry in order to practice dentistry in Canada?

- A. Malpractice.
- B. Office overhead.
- C. General liability.
- D. Long term disability.
- E. Employment.

The purpose of hand hygiene in infection control is primarily to reduce the

- A. resident microflora in the deep tissue layers.
- B. quantity of transient microorganisms on the surface of the hands.
- C. dryness of the skin prior to donning gloves.
- D. risk of patient contamination.

Shortly after the administration of a local anesthetic for the removal of tooth 2.8, the patient complains of a tenseness in the left cheek and left cheek swelling is observed. What is the most likely diagnosis?

- A. Surgical emphysema.
- B. Immediate allergic reaction.
- C. Herniation of buccal fat pad.
- D. Hematoma.

On a bite-wing radiograph, a smooth surface proximal carious lesion in enamel appears as a triangle with the

- A. base at the dentino-enamel junction.
- B. base facing toward the pulp.
- C. apex pointing to the enamel surface.
- D. apex pointing to the dentino-enamel junction.

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An inflammatory cellular infiltrate found in the connective tissue of healthy gingiva is

- A. a routine microscopic finding.
- B. an indication of systemic disease.
- C. composed chiefly of macrophages.
- D. a tissue response to food decomposition.

A 9 year old presents immediately after the avulsion of a permanent maxillary central incisor. Which of the following is the most appropriate management prior to re-implantation?

- A. Rinse the tooth with saline.
- B. Curette the root surface.
- C. Amputate the apex.
- D. Extirpate the pulp.

What is the most appropriate space management for a 4 year old patient who has lost all their primary maxillary incisors due to trauma?

- A. No treatment.
- B. A removable Hawley appliance.
- C. A fixed lingual holding arch.
- D. A fixed Nance button appliance.

The most common problem associated with two adjacent implants is

- A. peri-implantitis.
- B. lack of interdental papilla.
- C. granulation tissue.

The statute of limitations states that the period during which an action in negligence against a dentist can be initiated starts when the

- A. patient first meets the dentist.
- B. treatment is rendered.
- C. treatment is paid for.
- D. patient first becomes aware of the problem.
- E. patient seeks a second opinion about the problem.

A patient on hemodialysis

- A. should receive dental treatment only on the day of hemodialysis.
- B. should not be administered lidocaine for local anesthesia.
- C. is likely to have an increased red blood cell count.
- D. is at greater risk for infection.

Which viral hepatitis does NOT have a chronic carrier state?

- A. Hepatitis A.
- B. Hepatitis B.
- C. Hepatitis C.
- D. Hepatitis D.

For a patient taking warfarin, which laboratory test provides the most accurate information on coagulation time?

- A. Activated partial thromboplastin time.
- B. Ivy bleeding time.
- C. Platelet count.
- D. INR.
- E. Thrombin time.

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A patient with a unilateral left disc displacement without reduction is most likely to present with

- A. normal left excursion and limited right excursion.
- B. limited left excursion and normal right excursion.
- C. normal bilateral excursions.
- D. limited bilateral excursions.

An 8 year old patient presents 4 hours post-trauma with an oblique crown fracture of 2.1 exposing 2mm of vital pulp. The most appropriate pulpal treatment is

- A. apexogenesis.
- B. apexification.
- C. extraction.
- D. root canal treatment.

A diagnostic test for dental caries which has low sensitivity and high specificity will result in

- A. unnecessary treatment being provided.
- B. undetected disease.
- C. patients being alarmed unnecessarily.
- D. a test whose performance does not justify its cost.

Long term stability of the orthodontic correction of an anterior open bite is better

- A. following cessation of a thumb sucking habit.
- B. when the correction is accomplished by intrusion of the posterior teeth.
- C. in patients with decreased lower anterior face heights.
- D. when serial extractions are performed.

The most appropriate time to begin orthodontic correction of an Angle Class II malocclusion is

- A. following eruption of the maxillary first permanent molars.
- B. following eruption of the maxillary permanent central and lateral incisors.
- C. several months prior to the pubertal growth spurt.
- D. at the start of the pubertal growth spurt.

Which of the following is associated with aggressive periodontitis in adolescents?

- A. *Treponema denticola*.
- B. *Aggregatibacter* (*Actinobacillus*) *actinomycetemcomitans*.
- C. *Porphyromonas gingivalis*.
- D. *Prevotella intermedia*.

Dental plaque

- A. contains insoluble glucans.
- B. contains food particles.
- C. contains predominantly Gram-negative organisms.
- D. becomes less anaerobic as it matures.

The anticariogenic effect of systemic fluoride is related principally to the

- A. bactericidal action on oral flora.
- B. bacteriostatic action on oral flora.
- C. buffering effect on acids produced by cariogenic bacteria.
- D. alteration in the composition of the enamel.

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What is the most reliable indicator with respect to the timing of treatment for growth modification?

- A. Chronologic age.
- B. Dental age.
- C. Skeletal age.
- D. Tanner weight chart.

Tooth 3.6 has a disto-occlusal amalgam restoration with a gingival overhang. There is radiographic evidence of bone loss and deep probing depths with bleeding upon probing. Which of the following types of microorganisms are most likely associated with the subgingival environment in this site?

- A. Gram-positive and aerobic.
- B. Gram-positive and anaerobic.
- C. Gram-negative and aerobic.
- D. Gram-negative and anaerobic.

Saliva production is increased when blood flow to the salivary glands is

- A. stimulated by parasympathetic activity.
- B. stimulated by sympathetic activity.
- C. inhibited by acetylcholine.
- D. inhibited by cyclic AMP.

Pressure and tension have little effect on growth of

- A. the frontomaxillary suture.
- B. the alveolus.
- C. the mandible.
- D. cartilage.

"Dens in dente" is most commonly associated with

- A. supernumerary teeth.
- B. dentinogenesis imperfecta.
- C. osteogenesis imperfecta.
- D. anterior teeth.
- E. amelogenesis imperfecta.

Which of the following plasma proteins has the greatest ability to bind drugs?

- A. Albumin.
- B. Fibrinogen.
- C. Hemoglobin.
- D. Gamma globulin.
- E. B-lipoprotein.

Calculus causes gingival inflammation by

- A. mechanical irritation.
- B. stimulating auto immune responses.
- C. retaining micro-organisms.
- D. releasing toxins.

Sucralose

- A. breaks down at high temperatures and cannot be used in baking.
- B. is a derivative of sucrose.
- C. is twice as sweet as table sugar.
- D. causes constipation when ingested in excessive amounts.

The primary factor for selecting periodontal flap surgery rather than gingivectomy is

- A. presence of gingival edema.
- B. pocket depth.
- C. presence of subgingival calculus.
- D. need for access to the bony defect.

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A 13 year old complains of red, bleeding and swollen gums. Clinical examination reveals this is present only on the labial gingiva of the maxillary anterior teeth. What is the most likely etiologic factor?

- A. Blood dyscrasia.
- B. Insulin-dependent diabetes mellitus.
- C. Mouth breathing habit.
- D. Pubertal hormones.

The most common type of collagen found in the gingival connective tissue, periodontal ligament, and cementum is composed primarily of

- A. type I.
- B. type II.
- C. type III.
- D. type IV.

Tooth development begins when the basal layer of cells proliferates to form a ridge called the

- A. dental lamina.
- B. dental papilla.
- C. odontoblastic matrix.

Predominant organisms in necrotizing ulcerative gingivitis are

- A. spirochetes and fusiforms.
- B. Porphyromonas gingivalis.
- C. Prevotella intermedia.
- D. Actinomyces viscosus.

Which periodontal pathogen can use the hormone estrogen as a growth factor?

- A. Porphyromonas gingivalis.
- B. Aggregatibacter (Actinobacillus) actinomycetemcomitans.
- C. Prevotella intermedia.
- D. Tannerella forsythia.

When tumour cells revert to a more primitive, embryonic or undifferentiated form with an increased capacity for reproduction and a decreased function, this is called

- A. anaplasia.
- B. metaplasia.
- C. hypoplasia.
- D. hyperplasia.

In a peripheral nerve such as the trigeminal, unmyelinated C type fibres convey

- A. muscle spindle information.
- B. reflexes such as the jaw jerk reflex.
- C. nociceptive pain information.
- D. reflexes such as the jaw opening reflex.

When compared with that of its permanent successor, the occlusal surface of the primary mandibular second molar is

- A. larger mesiodistally.
- B. equal mesiodistally.
- C. narrower mesiodistally.
- D. equal buccolingually and mesiodistally.

A protrusive relation record should be made by instructing the patient to protrude the mandible

- A. 3-6mm.
- B. 7-10mm.
- C. 11-13mm.

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In recording centric relation registration, perforation of the recording material must be avoided because

- A. the material will undergo dimensional changes.
- B. contact of teeth could deflect the mandible.
- C. the recording material will be too weak and may fracture.

Ethically, a dentist can

- A. compensate a referring dentist.
- B. collect the third party payment without requesting the patient's portion.
- C. bill an insurance company a higher than usual fee, for the patient's benefit.
- D. charge different fees when warranted by clinical conditions.

A 67 year old patient with xerostomia presents with root caries. The most appropriate material to restore these lesions is

- A. flowable composite resin.
- B. hybrid composite resin.
- C. silver amalgam.
- D. glass ionomer cement.

The use of benzodiazepine in the elderly to manage anxiety

- A. should be done with caution as it is metabolized more slowly.
- B. is a safe and reliable practice.
- C. increases the incidence of insomnia.
- D. requires higher doses for clinical effects.

After root planing and plaque control instruction, a 22 year old patient still shows swollen and edematous gingiva with 3mm pockets and a 4 to 6mm band of attached gingiva. The most appropriate management is

- A. an apically repositioned split thickness flap.
- B. an apically repositioned full thickness flap.
- C. gingivectomy.
- D. further plaque control instruction.
- E. occlusal adjustment.

A patient presents with a chief complaint of "severe pain in my right ear" which began when eating, three hours ago. An examination reveals tenderness over the right preauricular region, maximum interincisal opening of 21mm with deflection to the right, right lateral excursion of 9mm and left lateral excursion of 2mm. The most likely diagnosis is

- A. left anterior disc displacement with reduction.
- B. right anterior disc displacement with reduction.
- C. left anterior disc displacement without reduction.
- D. right anterior disc displacement without reduction.

A 6 year old patient has an intrusive injury to tooth 5.2. All of the following are possible sequelae to the permanent successor EXCEPT

- A. enamel hypoplasia.
- B. root dilaceration.
- C. delayed eruption.
- D. ectopic eruption.

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The labial/buccal attached gingiva on permanent teeth is normally widest at the

- A. mandibular canines.
- B. maxillary premolars.
- C. mandibular premolars.
- D. maxillary lateral incisors.

The blood vessel which may be injured when harvesting a connective tissue graft from the palatal mucosa is the

- A. sphenopalatine.
- B. nasopalatine.
- C. posterior superior alveolar.
- D. greater palatine.

The most frequent cause of hyposalivation in elderly patients is

- A. Alzheimer's disease.
- B. multiple medications.
- C. salivary gland atrophy.
- D. Sjögren's syndrome.

In periodontal surgery, it is important to determine the position of the base of the pocket to the

- A. cemento-enamel junction.
- B. tip of the inter-dental papilla.
- C. furcation.
- D. mucogingival junction.

The physiopathology of sleep apnea is most likely related to

- A. excessive oropharyngeal muscular tonus during sleep.
- B. central nervous system respiratory depression.
- C. obstruction in lower airways.
- D. a severe Angle Class III malocclusion.

Osteomalacia is seen in

- A. Vitamin C deficiency.
- B. adult rickets.
- C. protein deficiency.
- D. hyperparathyroidism.

Which of the following tests is/are specific in the diagnosis of anemia?

- A. A complete blood count.
- B. Measuring the concentration of hemoglobin.
- C. White cell count and hematocrit determination.
- D. Hematocrit determination, hemoglobin concentration and red cell count.

In healthy gingiva, the level of the interproximal alveolar crest is related to the

- A. thickness of the alveolar process.
- B. location of the gingival margin.
- C. amount of underlying trabecular bone.
- D. position of the cemento-enamel junction.

One week following extraction of teeth 1.8 and 4.8, an 18 year old male returns to the dental office complaining of persistent bleeding from the extraction sites. The medical history is unremarkable, except for episodes of bruising and joint swelling as a child. Subsequent blood tests show normal bleeding time and a factor VIII level of 14%. The most likely cause of the bleeding is

- A. a dry socket.
- B. ibuprofen intake.
- C. hemophilia A.
- D. cirrhosis of the liver.
- E. vitamin K deficiency.

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A primary infection of syphilis occurring on the tongue is referred to as a/an

- A. herpetic ulcer.
- B. aphthous ulcer.
- C. gumma.
- D. chancre.
- E. mucous patch.

A 78 year old patient presents with several carious lesions on the root surfaces of the maxillary posterior teeth. The most appropriate restorative material for these lesions is

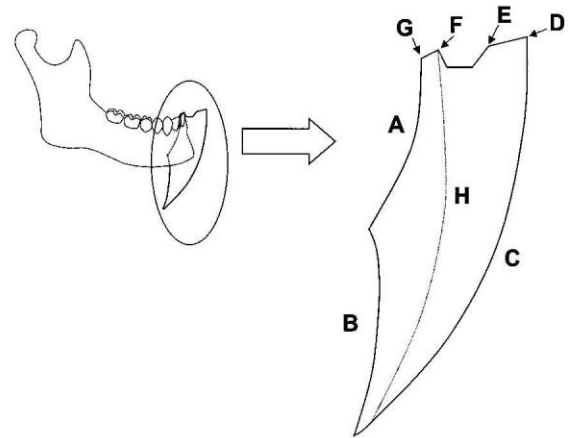
- A. microfilled composite resin.
- B. hybrid composite resin.
- C. amalgam.
- D. Resin-modified glass ionomer.

Biocompatibility tests conducted in vitro

- A. follow screening with an animal model.
- B. predict human cell growth or death.
- C. reproduce the in vivo environment.
- D. are more easily standardized than clinical studies.

Interproximal reduction of the mesial of the lower primary cuspids is indicated to

- A. encourage mesial movement of the deciduous molars.
- B. provide space for alignment of the permanent incisors when crowding is 1-3mm.
- C. provide space for alignment of the permanent incisors when crowding is 3-5mm.
- D. decrease inter-cuspid arch width.



The above diagram demonstrates a lateral view of a tracing illustrating the border movements of a mandibular incisor point in an Angle's Class I occlusion. The opening pathway from maximum intercuspation follows

- A. pathway A.
- B. pathway A and B.
- C. pathway C.
- D. pathway H.
- E. none of these pathways.

After the cementation of a crown, chronic gingivitis would most likely be the result of a/an

- A. subgingival finish line.
- B. supragingival finish line.
- C. undercontoured crown.
- D. overcontoured crown.

Administration of succinylcholine to a patient deficient in serum cholinesterase would most likely result in

- A. convulsions.
- B. hypertension.
- C. prolonged apnea.
- D. acute asthmatic attack.

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Which antibiotic is primarily bactericidal?

- A. Penicillin.
- B. Erythromycin.
- C. Tetracycline.
- D. Chloramphenicol.
- E. Clindamycin.

A patient who has until recently been on prolonged corticosteroid therapy may have

- A. increased bleeding time.
- B. hyposensitivity to pain.
- C. decreased tolerance to physiological stress.
- D. an increased metabolic rate.
- E. high level of plasmatic cortisol.

Osteoporosis may result from

- A. hypothyroidism.
- B. acromegaly.
- C. diabetes.
- D. prolonged steroid therapy.

A healthy 78 year old patient presents with three new carious lesions on root surfaces. This is most likely the result of

- A. age related changes in cementum composition.
- B. the architecture at the CEJ.
- C. changes in dietary pattern.
- D. chronic periodontal disease.

Granulation tissue is composed of

- A. plasma cells and giant cells.
- B. fibroblasts, capillaries and chronic inflammatory cells.
- C. fibroblasts and eosinophils.
- D. epithelial cells and tissue phagocytes.

A patient presents with a non-healing lesion on the side of the nose. It has a rolled border and has been increasing in size. The most likely diagnosis is

- A. a sebaceous cyst.
- B. a basal cell carcinoma.
- C. lupus erythematosus.
- D. verruca vulgaris.
- E. an epulis.

A 28 year old patient who has severe anterior crowding, an Angle Class II malocclusion, and a high DMFS score wants orthodontic treatment. Which of the following is the most appropriate initial step in management of this case?

- A. Cephalometric analysis.
- B. Diagnostic wax-up.
- C. Caries risk assessment.
- D. Fluoride rinse prescription.

The muscle attached to the labial surface of the maxilla above the region of the central incisors is

- A. labii inferioris.
- B. labii superioris.
- C. orbicularis oris.
- D. risorius.
- E. caninus.

The most important diagnostic element in assessing the periodontal status of a patient is the

- A. results of vitality testing.
- B. radiographic appearance.
- C. depth of periodontal pockets.
- D. mobility of the teeth.

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The principal reason for a cavosurface bevel on a gold inlay preparation is to

- A. remove undermined enamel.
- B. improve marginal adaptation.
- C. decrease marginal percolation.
- D. increase resistance and retention forms.

In a healthy 75 year old, which of the following would be considered normal blood pressure?

- A. 175/95 mmHg.
- B. 135/86 mmHg.
- C. 130/100 mmHg.
- D. 185/94 mmHg.

The most frequent cause of death occurring under general anesthesia is

- A. overdosage of anesthetic agent.
- B. cardiac arrest.
- C. traction on the viscera.
- D. mismanagement of the airway.
- E. overdosage of premedication.

Which of the following compounds released by inflammatory cells induces bone resorption?

- A. Nitric oxide.
- B. Interleukin-1.
- C. Bradykinin.
- D. Alkaline phosphatase.

Which of the following is NOT a sign of occlusal trauma?

- A. Fremitus.
- B. Gingival recession.
- C. Widened periodontal ligament.
- D. Tooth migration.

The cell of the dental pulp most capable of transforming into other cells is the

- A. fibroblast.
- B. mesenchymal cell.
- C. odontoblast.
- D. histiocyte.

Which of the following conditions is most likely to lead to thrombosis?

- A. Stasis of blood.
- B. Presence of bacteria in blood.
- C. Deficiency of circulating platelets.
- D. Increased concentration of plasma.
- E. Lowered oxygenation of hemoglobin.

Maxillary furcation involvements are best assessed clinically by probing with a

- A. Williams probe.
- B. Nabers probe.
- C. Michigan "O" probe.
- D. Periodontal Screening and Recording (PSR) probe.

The most likely complication following surgery for a patient with thrombocytopenic purpura would be

- A. angina.
- B. hemorrhage.
- C. alveolar osteitis.
- D. delayed healing.
- E. infection.

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A 45 year old with insulin-dependent diabetes mellitus has a morning dental appointment. During the examination, the patient complains of being lightheaded and weak. Sweating is observed. The patient is most likely experiencing

- A. hyperglycemia.
- B. hypoglycemia.
- C. syncope.
- D. hyperventilation.
- E. cerebrovascular accident.

The most appropriate management for a patient with bilateral temporomandibular joint clicking without pain is

- A. no treatment.
- B. temporomandibular joint surgery.
- C. an anterior repositioning splint.
- D. cortisone injections.

Although a dentist recommends an all-ceramic crown to a patient who requires restoration of a fractured maxillary lateral incisor, the patient requests a full gold crown be placed. The most appropriate management is to

- A. insist on placing a more esthetic crown.
- B. place a provisional crown on the tooth indefinitely.
- C. place a full gold crown as the patient requested.
- D. restore the tooth with composite until the patient reconsiders.

A 65 year old patient who has recovered from a stroke 6 months previously and has a history of endocarditis requires the extraction of a mandibular molar. The vital signs are

Blood Pressure: 135/85 mmHg  
Pulse: 76/min  
Respiratory Rate: 16/min

The most appropriate immediate management of this patient is to

- A. proceed with the treatment.
- B. use prophylactic antibiotics.
- C. use local anesthetic with no epinephrine.
- D. delay treatment for 3 months.

Which of the following is the most effective method of cleaning endodontic instruments prior to sterilization?

- A. Manual brushing.
- B. High pressure water jet.
- C. Washing with antimicrobial soap.
- D. Washing in an ultrasonic bath for 5 minutes.

Folate deficiency is associated with an increased risk of

- A. birth defects.
- B. microcytic anemia.
- C. low serum homocysteine.
- D. elevated high-density lipoprotein cholesterol.

The presence of hepatitis B surface antigen (HBsAg) and hepatitis B e antigen (HBeAg) in blood indicates the individual

- A. is infectious for hepatitis B.
- B. has acquired immunity to hepatitis B.
- C. is not infectious for hepatitis B and has not acquired immunity to hepatitis B.
- D. has never been infected with hepatitis B.

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Which of the following entities has the greatest malignant potential?

- A. Junctional nevus.
- B. Oral melanotic macule.
- C. Granular cell tumour.
- D. White sponge nevus.

Which of the following increases the risk for bronchospasm in asthmatic patients?

- A. Prednisone.
- B. Ibuprofen.
- C. Lidocaine.
- D. Nitrous oxide.
- E. Oxycodone.

Which of the following drugs is used in treating opioid-dependent individuals?

- A. Codeine.
- B. Methadone.
- C. Naloxone.
- D. Pentazocine.
- E. Meperidine.

A large pericoronal radiolucency associated with an impacted third molar tooth is most likely a/an

- A. ameloblastoma.
- B. traumatic bone cyst.
- C. eruption cyst.
- D. dentigerous cyst.
- E. calcifying odontogenic cyst.

A smooth-surfaced, solid, exophytic oral mucosal lesion with no colour change is most likely a/an

- A. mucocele.
- B. papilloma.
- C. hemangioma.
- D. fibroma.
- E. intramucosal nevus.

Ocular lesions may be associated with

- A. lichen planus.
- B. herpangina.
- C. necrotizing ulcerative gingivitis.
- D. leukoplakia.
- E. mucous membrane pemphigoid.

Geographic tongue is characterized by

- A. congenital soft tissue deformity.
- B. atrophic filiform papillae.
- C. association with hairy tongue.
- D. predominance in elderly patients.

Which of the following is the most frequent major congenital malformation of the head and neck?

- A. Cystic hygroma.
- B. Cleft palate.
- C. Encephalotrigeminal angiomas.
- D. Double lip.

Which of the following muscles of mastication is associated with the condylar head and articular disc?

- A. Masseter.
- B. Temporalis.
- C. Medial pterygoid.
- D. Lateral pterygoid.

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The normal differential white cell count for neutrophils is

- A. 10-19%.
- B. 20-29%.
- C. 30-39%.
- D. 40-65%.
- E. 66-90%.

Premature loss of a primary maxillary second molar usually produces a malocclusion in the permanent dentition that is characterized by

- A. anterior crowding.
- B. labially displaced maxillary canines.
- C. delayed eruption of the permanent first molar.
- D. an Angle Class II molar relationship on the affected side.
- E. an Angle Class III molar relationship on the affected side.

Typically, vital pulps of elderly patients

- A. show a decrease in the number of collagenous fibres.
- B. have decreased reparative capacity compared to younger adults.
- C. form dentinal bridges after appropriate pulp capping procedures.
- D. show an increase in myelinated nerves when compared to pulps of younger adults.

Thinned cortical bone, decreased cancellous trabeculation, enlargement of the medullary cavity and decreased bone density are radiographic features of

- A. osteomalacia.
- B. osteopetrosis.
- C. osteoradionecrosis.
- D. osteoporosis.

Which of the following does NOT have a multilocular radiolucent appearance?

- A. Ameloblastoma.
- B. Odontogenic myxoma.
- C. Stafne's bone defect/static bone cavity.
- D. Central giant cell granuloma.
- E. Cherubism.

Total removal of subgingival calculus on a tooth with pockets more than 5mm deep is best achieved by

- A. ultrasonic scaling.
- B. root planing.
- C. surgery and scaling.
- D. subgingival irrigation.

The coronoid process of the mandible can be seen in all of the following types of radiographs EXCEPT

- A. periapical.
- B. maxillary occlusal.
- C. panoramic.
- D. lateral cephalometric.

An 8 year old patient has a 3mm diastema between the erupting permanent maxillary central incisors. What is the most likely cause?

- A. Failure of fusion of the premaxillae.
- B. Abnormal labial frenum.
- C. Supernumerary tooth in the midline.
- D. Normal eruption pattern.

An incipient carious lesion on an interproximal surface is usually located

- A. vestibular to the contact area.
- B. lingual to the contact area.
- C. gingival to the contact area.
- D. occlusal to the contact area.

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Which of the following is suggestive of a malignant tumour of the parotid gland?

- A. Excessive salivation.
- B. Seventh cranial nerve paralysis.
- C. Sudden swelling.
- D. Fluctuation.

A clinical sign of an acute disc dislocation without reduction in the right TMJ is

- A. deflection of the mandible to the left at maximal mouth opening.
- B. deflection of the mandible to the right during protrusion.
- C. maximal opening of 55mm.
- D. reciprocal click in the right TMJ.
- E. limitation in right laterotrusion.

Which of the following muscles causes displacement of the condyle in a subcondylar fracture of the mandible?

- A. Medial pterygoid.
- B. Lateral pterygoid.
- C. Masseter.
- D. Temporalis.
- E. Superior pharyngeal constrictor.

Which of the following is a clinical CONTRAINDICATION for an all-ceramic maxillary anterior crown?

- A. Excessive overjet and overbite.
- B. Normal overjet and excessive overbite.
- C. An endodontically treated tooth with a cast post and core.
- D. A low caries index.

Which of the following types of publications is the most reliable source for making evidence-based clinical decisions?

- A. Dental manufacturer's product information.
- B. Professional association journals.
- C. Systematic review articles from dental research journals.
- D. Case reports in dental journals.

A panoramic radiograph taken at 10 years of age is indicated to

- A. measure the space between the temporomandibular joint disc and the condyle.
- B. calculate the amount of crowding in the maxilla.
- C. predict the probability of canine impaction.
- D. assess the severity of midline deviation.

The permanent first molars of a 7 year old patient have pronounced, deep occlusal fissures that are stained. Bite-wing radiographs show a normal dentino-enamel junction. The most appropriate treatment is

- A. conservative amalgam restorations.
- B. glass-ionomer restorations.
- C. application of pit and fissure sealants.
- D. topical fluoride application.
- E. observation.

Embryologically, fusion of the palatal shelves should be completed by the

- A. fifth week.
- B. tenth week.
- C. fifteenth week.
- D. twentieth week.

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A 5 year old child has yellow pigmentation of the deciduous teeth which under ultraviolet light gives a bright yellow fluorescence. The most likely diagnosis is

- A. tetracycline pigmentation.
- B. pigmentation associated with chromogenic bacteria.
- C. amelogenesis imperfecta.
- D. enamel hypoplasia.

A 3 year old presents with subluxated maxillary central incisors. The occlusion is normal. What is the most appropriate management?

- A. Reposition the teeth and place the child on a soft diet.
- B. Reposition the teeth and splint for 7 to 10 days.
- C. Place the child on a soft diet and monitor the teeth.
- D. Extract the traumatized teeth.

Which of the following is the most active cell in synthesizing and secreting antibodies?

- A. Mast cell.
- B. Macrophage.
- C. Eosinophilic granulocyte.
- D. Plasma cell.
- E. T-cell lymphocyte.

A patient experiences pain and some gingival swelling in the anterior segment of the mandible. The mandibular lateral incisor has a shallow restoration, is tender to percussion and gives a positive response to an electric pulp test. There is some mobility. What is the most likely diagnosis?

- A. Acute apical abscess (acute periradicular abscess).
- B. Symptomatic irreversible pulpitis.
- C. Periodontal abscess.
- D. Reversible pulpitis.

The muscles used when closing the jaws to maximum intercuspation include

- A. medial pterygoid, lateral pterygoid and masseter muscles.
- B. temporalis, medial pterygoid, masseter and geniohyoid muscles.
- C. medial pterygoid, temporalis and masseter muscles.
- D. lateral pterygoid, masseter, temporalis and geniohyoid muscles.

A loss of sensation in the lower lip may be produced by

- A. Bell's palsy.
- B. trigeminal neuralgia.
- C. malignancy in the body of the mandible.
- D. fracture in the mandibular canine region.

In fixed bridge construction, when the vertical dimension has to be increased, the most important consideration is that

- A. there is sufficient tooth bulk in the abutment teeth for retention.
- B. the interocclusal distance will be physiologically tolerated.
- C. the aesthetic appearance of the patient will be improved.
- D. a favorable crown-root ratio is established.

Dysplastic lesions of squamous epithelium occur most often on the

- A. palate.
- B. gingiva.
- C. buccal mucosa.
- D. dorsum of the tongue.
- E. floor of the mouth.

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Which of the following is a proliferative response of the soft tissue to an irritant?

- A. Cellulitis.
- B. Abscess.
- C. Pyogenic granuloma.
- D. Aphthous ulcer.

Preoperative endodontic radiographs will show the

- A. presence of a pulp exposure.
- B. exact location of the apical foramen.
- C. presence of active infection.
- D. vitality of the pulp.
- E. size of the pulp chamber and root canal(s).

Periapical odontogenic cysts are primarily associated with

- A. impacted wisdom teeth.
- B. congenitally missing teeth.
- C. nonvital teeth.

The histopathologic changes in chronic gingivitis are characterized by

- A. loss of rete pegs and destruction of the basement membrane.
- B. hyalinization of the principal fibres of the periodontal ligament.
- C. an inflammatory infiltrate of plasma cells and lymphocytes.
- D. an inflammatory infiltrate in which polymorphonuclear cells predominate.

Desquamation of the gingiva usually occurs as a result of

- A. inflammation.
- B. benign neoplasia.
- C. normal cell turnover.
- D. a developmental abnormality.

The postnatal increase in width of the maxilla results from

- A. sutural growth.
- B. appositional growth.
- C. both appositional and sutural growth.

Following the administration of a right inferior alveolar nerve block, right facial paralysis is noted. Which of the following muscles is NOT affected?

- A. Levator palpebrae superioris.
- B. Buccinator.
- C. Mentalis.
- D. Nasalis.
- E. Orbicularis oris.

The most likely diagnosis for a patient with an interincisal opening of 30mm before feeling pain and a maximum opening of 44mm with pain is

- A. internal derangement of the TMJ with reduction.
- B. internal derangement of the TMJ without reduction.
- C. trismus of the masticatory muscles.
- D. subluxation of the TMJ.
- E. myofascial pain.

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The respiration of a patient with chronic obstructive pulmonary disease (COPD) is primarily controlled by

- A. hypercapnia.
- B. hypoxia.
- C. alkalosis.
- D. baroreceptors.

The mandibular primary second molar is extracted in a 5 year old patient. The most appropriate time to construct a space maintainer is

- A. during eruption of the mandibular permanent first molar.
- B. one year after eruption of the mandibular permanent first molar.
- C. one year before eruption of the mandibular permanent first molar.
- D. immediately.

Guided tissue regeneration is a surgical procedure used to

- A. repair connective tissue.
- B. repair cemental defects.
- C. regenerate long junctional epithelial attachment.
- D. regenerate the periodontium.

Primary teeth start to calcify in the fetus at approximately the

- A. first month.
- B. third month.
- C. fifth month.
- D. seventh month.

The DMF (decayed, missing, filled) index for dental caries in adults

- A. measures dental caries experience.
- B. does not apply to all populations.
- C. ignores recurrent dental caries.
- D. includes teeth missing for any reason.

Maximum intercuspation on a complete denture should be established to correspond with centric relation because

- A. chewing occurs in centric relation.
- B. it makes it easier to set up the teeth.
- C. centric relation is a good reference position.
- D. it prevents cheek biting.

Codeine administration is associated with all the following side effects EXCEPT

- A. sedation.
- B. constipation.
- C. gastric ulceration.
- D. nausea.

The percussion test is used to test nerve response in the

- A. pulp.
- B. alveolar bone.
- C. attached gingiva.
- D. periodontal ligament.
- E. mucosa.

Which of the following is consistent with a diagnosis of reversible pulpitis?

- A. Lingering pain to cold.
- B. Pain on percussion.
- C. Lingering pain to heat.
- D. No spontaneous pain.

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Which of the following teeth are most commonly lost due to periodontal disease?

- A. Maxillary first and second premolars.
- B. Maxillary first and second molars.
- C. Mandibular first and second premolars.
- D. Mandibular central and lateral incisors.

Vertical releasing incisions for a full-thickness flap should cross the free gingival margin at the

- A. line angles of the tooth.
- B. midfacial aspect of the tooth.
- C. tip of the interdental papillae.
- D. most prominent aspect of the root.

Collagenase activity is inhibited by

- A. clindamycin.
- B. tetracycline.
- C. penicillin.
- D. metronidazole.

Which of the following is most indicative of a sialolith in the submandibular duct?

- A. Periodic swelling of the cheek.
- B. Fluctuant bluish swelling in the floor of the mouth.
- C. Drainage of pus from Stensen's duct.
- D. Pain and swelling associated with eating.

Cleidocranial dysplasia can be associated with

- A. fragile bones.
- B. multiple supernumerary teeth.
- C. keratocystic odontogenic tumours.
- D. high incidence of facial clefts.

The gingivectomy is a useful technique to eliminate

- A. infrabony pockets.
- B. suprabony pockets.
- C. thick osseous ledges.
- D. mucogingival problems.

The predominant microorganisms in deep dentinal caries are

- A. Streptococcus mutans.
- B. Lactobacillus species.
- C. Streptococcus salivarius.
- D. Actinomyces species.

A facebow is used to record the

- A. vertical dimension of occlusion.
- B. horizontal condylar inclination.
- C. incisal guidance.
- D. relationship of the maxilla to the horizontal hinge axis.

Which of the following does NOT improve the retention of a Class II inlay?

- A. Adding an occlusal dovetail.
- B. Placing a gingival bevel.
- C. Increasing the parallelism of walls.
- D. Lengthening the axial walls.

The most appropriate management for a concussed tooth is

- A. observation.
- B. pulpotomy.
- C. pulpectomy.
- D. splinting.

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Which of the following conditions requires further information prior to making a decision regarding antibiotic prophylaxis for an invasive procedure?

- A. Previous coronary bypass.
- B. Presence of a coronary artery stent.
- C. Existing mitral valve prolapse.
- D. Repaired congenital heart disease.

A tooth with 3mm of gingival recession and a probing depth of 5mm at the same site has an attachment loss of

- A. 2mm.
- B. 3mm.
- C. 5mm.
- D. 8mm.

The primary purpose of an indirect retainer in a distal extension removable partial denture is to

- A. increase the retention of the removable partial denture.
- B. prevent the distal extension moving away from the tissues.
- C. increase stress distribution among the abutment teeth.
- D. increase stability of the remaining abutment teeth.

A crown with an acceptable marginal fit on the original die has a uniform margin opening of 1mm when placed intraorally. Which of the following should be modified to address this problem?

- A. The proximal surfaces of the crown.
- B. The occlusal surface of the crown.
- C. The internal surfaces of the crown.
- D. The occlusal surface of the preparation.

The hydrophilicity of an impression material is defined by its

- A. high water absorption.
- B. small contact angle.
- C. osmotic property.
- D. water content.

A patient is currently on warfarin. Before a planned extraction of tooth 3.4, the patient's coagulation mechanisms should be evaluated using which test?

- A. Bleeding time.
- B. Partial thromboplastin time.
- C. INR (International Normalized Ratio).

Upon completion of primary dentin formation in a healthy permanent tooth, the majority of the inner dentinal tubules contain

- A. capillary extensions.
- B. stellate reticulum cells.
- C. odontoblast projections.
- D. neuronal projections.

Which of the following occurs if there is a defective development of the epithelial root sheath?

- A. Hypomineralized dentin.
- B. No cementum.
- C. Brittle dentin.
- D. No eruption.

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The gingival margin of the preparation for a full crown on a molar, that satisfies the requirements for retention and resistance, ideally should be placed

- A. 0.5mm subgingivally.
- B. 1.0mm subgingivally.
- C. at the gingival margin.
- D. supragingivally.

Which of the following is the best indication for the removal of mandibular third molars?

- A. Recurrent pericoronitis.
- B. Prevention of crowding of mandibular incisors.
- C. Generalized aggressive periodontitis.
- D. Impaction.

The mucogingival line denotes the

- A. separation between the marginal gingiva and the alveolar mucosa.
- B. separation between the attached gingiva and the marginal gingiva.
- C. junction between the attached gingiva and the alveolar mucosa.
- D. junction between the mucoperiosteum and gingiva.

Which of the following is true regarding the incision and drainage of an acute periradicular abscess?

- A. Profound, deep anesthesia is needed to perform the procedure.
- B. Relief of the pressure and pain will take 24 hours to occur.
- C. The procedure is indicated for a localized, fluctuant swelling.
- D. A drain should not be used if drainage occurs during the procedure.

Achieving root coverage with a connective tissue graft is most dependent on the presence of sufficient

- A. interdental soft and hard tissue.
- B. buccal and lingual soft and hard tissue.
- C. unattached gingiva adjacent to the site.
- D. attached gingiva adjacent to the site.

Occlusal trauma can

- A. initiate periodontitis.
- B. increase tooth mobility.
- C. exacerbate gingival hyperplasia.
- D. cause gingival recession.

Oral hairy leukoplakia primarily occurs with

- A. diabetes.
- B. hepatitis A.
- C. HIV.
- D. hypophosphatasia.
- E. Papillon-Lefèvre syndrome.

The effects of constant mouth breathing include

- A. expansion of the maxilla.
- B. mandibular incisor protrusion.
- C. anterior open bite.
- D. maxillary incisor retrusion.

What is the most appropriate management for nocturnal bruxism in the presence of malocclusion?

- A. Occlusal appliance, control of parafunctional habits and stress reduction techniques.
- B. Muscle relaxants, calcium channel blockers and benzodiazepines.
- C. Prosthetic reconstruction.
- D. Physiotherapy and removal of occlusal interferences.

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If there is persistent pain after a thermal stimulus has been removed from a tooth, the most likely diagnosis is

- A. pulp necrosis.
- B. reversible pulpitis.
- C. irreversible pulpitis.

The most appropriate method to prevent root canal obstruction during the instrumentation phase of endodontic treatment is to

- A. obtain adequate access.
- B. use a chelating agent.
- C. irrigate copiously.
- D. use reamers instead of files.

For a patient with chronic renal failure,

- A. dental procedures should be performed on non-dialysis days.
- B. normal bleeding can be expected if the platelet count is normal.
- C. the arm used for vascular access during dialysis can be used to measure blood pressure.

Which of the following is the maximum daily dose of acetaminophen for a healthy adult?

- A. 2,000 mg.
- B. 4,000 mg.
- C. 6,000 mg.
- D. 8,000 mg.

What localized changes occur in soft tissue when it becomes infected?

- A. Increased pH, increased blood flow.
- B. Decreased pH, increased blood flow.
- C. Increased pH, decreased blood flow.
- D. Decreased pH, decreased blood flow.

Which of the following symptoms is always present with a diagnosis of alveolar osteitis?

- A. Swelling.
- B. Erythema.
- C. Fever.
- D. Pain.

The buccal (long buccal) nerve is a branch of

- A. V<sub>3</sub> and provides motor innervation to the buccinator muscle.
- B. V<sub>2</sub> and provides sensory innervation to the posterior mandibular buccal gingiva.
- C. V<sub>3</sub> and provides sensory innervation to the posterior mandibular buccal gingiva.
- D. V<sub>2</sub> and provides motor innervation to the buccinator muscle.

All of the following are oral complications of uncontrolled diabetes mellitus EXCEPT for

- A. periodontal bone loss.
- B. delayed healing.
- C. hairy leukoplakia.
- D. oral candidiasis.

In an Angle Class I occlusion, the mesiobuccal cusp of the maxillary first molar occludes with

- A. mesiobuccal cusp of the mandibular first molar.
- B. mesiobuccal groove of the mandibular first molar.
- C. mesial marginal ridge of the mandibular first molar.
- D. central fossa of the mandibular first molar.

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When a pit and fissure sealant is placed over early but noncavitated caries

- A. the sealant retention rate is greatly reduced.
- B. bacterial loads generally increase under the sealant.
- C. the likelihood of caries progression is reduced.
- D. the caries will be arrested only if it is a primary tooth.

A flush terminal plane will convert to an Angle Class I occlusion by

- A. closure of mandibular primate space.
- B. mandibular forward growth exceeding maxillary growth.
- C. mesial movement of the mandibular first permanent molars into the leeway space.
- D. distal movement of the maxillary first permanent molars.

A 7 year old patient presents 4 hours post-trauma with an oblique crown fracture of tooth 2.1 exposing 2mm of vital pulp. The most appropriate treatment is

- A. vital pulpotomy and placement of calcium hydroxide.
- B. pulpectomy and obturation with calcium hydroxide.
- C. extraction and prosthesis.
- D. pulpectomy and obturation with gutta-percha.

The degree of curing of a composite resin is dependent on all of the following EXCEPT the

- A. wavelength of the emitted light.
- B. intensity of the light source.
- C. duration of light exposure.
- D. distance from the light tip to the composite surface.
- E. amount of light reflected by the composite surface.

Which of the following is a major risk factor for the progression of chronic periodontitis?

- A. Osteoporosis.
- B. Human papillomavirus infection.
- C. Hypothyroidism.
- D. Cigarette smoking.

After the initial incision and raising of a flap in the modified Widman technique, the next step is

- A. debridement of the roots.
- B. decortication of bony defects.
- C. denudation of the periosteum.
- D. removal of inflammatory tissue.

The primary function of a post used in an endodontically treated tooth is to

- A. strengthen the root.
- B. maximize esthetics.
- C. avoid leakage into the root canal.
- D. retain the core.

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A 39 year old patient has lingering pain to heat in the area of tooth 3.6 and has referred pain to the left ear. There is a large MOD amalgam on tooth 3.6. The most likely diagnosis is

- A. normal pulp.
- B. reversible pulpitis.
- C. asymptomatic irreversible pulpitis.
- D. symptomatic irreversible pulpitis.
- E. pulpal necrosis.

Which of the following drugs is most likely to cause gingival overgrowth?

- A. Tetracycline.
- B. Nifedipine.
- C. Insulin.
- D. Hydrochlorothiazide.

When the gingival margin is at the level of the cemento-enamel junction (CEJ), the loss of attachment is

- A. less than the pocket depth.
- B. greater than the pocket depth.
- C. equal to the pocket depth.

A strict vegetarian is at greatest risk for developing a deficiency of which one of the following nutrients?

- A. Ascorbic acid.
- B. Potassium.
- C. Vitamin B<sub>12</sub>.
- D. Sodium.

A CONTRAINDICATION for a pulpectomy on a primary molar is

- A. pulpal hyperemia.
- B. spontaneous nocturnal pain.
- C. pulp tissue necrosis.
- D. less than 1/3 of the root structure remaining.

The most likely reason for extracting four first premolars in orthodontics is because of

- A. retrusive maxillary incisors.
- B. an excessive overbite.
- C. a tooth size/arch size discrepancy.
- D. posterior crossbite.

Growth in maxillary width occurs mainly via

- A. bone apposition laterally.
- B. endochondral ossification.
- C. expansion of the palatal suture.
- D. buccinator muscular pull.

A lateral force applied to the crown of a tooth will result in the crown moving

- A. in one direction and the root apex in the opposite direction.
- B. in the same direction as the root apex.
- C. along the line of force while the root apex remains stationary.

The most likely cause of loss of a pit and fissure sealant is the

- A. placement of the sealant over enamel caries.
- B. the failure to use primer prior to its placement.
- C. moisture contamination during placement.
- D. use of a chemical-cured sealant.

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Many months after trauma to a primary incisor, the development of a greyish discolouration in the crown usually indicates

- A. pulp necrosis.
- B. pulp canal calcification.
- C. external root resorption.
- D. internal root resorption.

The most appropriate immediate management of a hematoma following a posterior superior alveolar nerve block is to

- A. incise into the buccal sulcus.
- B. apply firm direct pressure.
- C. aspirate with a wide bore needle.
- D. place hot towels over the cheek.

A patient with an orofacial infection is most at risk for spread of infection by bacteria travelling through

- A. arteries.
- B. airways.
- C. peripharyngeal spaces.
- D. the maxillary sinus.

A 30 year old patient has bilateral asymptomatic, bony hard nodules on the lingual surface of the anterior mandible. The most appropriate management is

- A. excisional biopsy of the nodules.
- B. referral for potential premalignant colonic polyps.
- C. vitality test of teeth adjacent to the nodules.
- D. observation at routine recalls.
- E. a bone scan for metastatic tumours.

A 58 year old patient is being managed with topical corticosteroids for ulcerative oral mucosal lesions. A recall examination reveals widespread, loosely adherent, soft white plaques. The most appropriate management would be

- A. a more potent topical corticosteroid.
- B. a systemic corticosteroid.
- C. antibiotic therapy.
- D. antifungal medication.
- E. incisional biopsy.

A patient has a one year history of recurrent pain that lasts less than one minute. The pain is extreme and lancinating, affecting the lower right face and jaw and can be brought on by light touch of the skin over the lower right lip and chin. The most likely diagnosis is

- A. trigeminal neuralgia.
- B. cluster headache.
- C. myofascial pain.
- D. migraine.

A 55 year old Caucasian with a long-term tobacco habit has diffuse pigmentation involving only the anterior mandibular labial gingiva. The most likely diagnosis is

- A. Addison's disease.
- B. hemochromatosis.
- C. racial pigmentation.
- D. smoker's melanosis.
- E. drug-induced pigmentation.

A patient has gingival epithelium that spontaneously sloughs and can be removed with minor manipulation. The most likely diagnosis is

- A. hyperplastic candidiasis.
- B. aphthous stomatitis.
- C. herpetic gingivostomatitis.
- D. mucous membrane pemphigoid.

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Glossodynia can be associated with

- A. vitamin B<sub>12</sub> deficiency.
- B. occult malignancy.
- C. lichenoid reaction to amalgam.
- D. sialorrhea.
- E. vitamin D overdose.

Generalized loss of lamina dura is an early sign of

- A. Addison's disease.
- B. Cushing's disease.
- C. hyperparathyroidism.
- D. hyperthyroidism.

Radiologic interradicular scalloping of bone is a characteristic of a

- A. residual cyst.
- B. simple/traumatic bone cyst.
- C. dentigerous cyst.
- D. radicular cyst.

Which of the following is NOT a symptom of hypercalcemia?

- A. Paresthesia.
- B. Constipation.
- C. Anoxia.
- D. Lethargy.

Which condition has NOT been associated with *Candida albicans* infection?

- A. Median rhomboid glossitis.
- B. Angular cheilitis.
- C. Denture stomatitis.
- D. Aphthous ulcerations.
- E. Oral hairy leukoplakia.

Which of the following is NOT a significant component of dental plaque?

- A. Lipids.
- B. Collagen.
- C. Carbohydrates.
- D. DNA.

Treatment of a *S. aureus* infection with penicillin is often complicated by the

- A. inability of penicillin to penetrate the membrane of *S. aureus*.
- B. production of penicillinase by *S. aureus*.
- C. secretion of penicillin acetylase by *S. aureus*.
- D. allergic reaction caused by staphylococcal protein.

A positive tuberculin test means that the patient

- A. should be vaccinated against tuberculosis.
- B. is susceptible to tuberculosis.
- C. has had prior exposure to *Mycobacterium* species.

With age, dentinal tubules become occluded because odontoblast cellular projections

- A. produce organic molecules.
- B. swell and expand.
- C. absorb dentinal fluid.
- D. deposit more mineral.

Which analgesic interferes with platelet aggregation?

- A. Acetaminophen.
- B. Ibuprofen.
- C. Oxycodone.

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Which of the following is the most appropriate in the management of chronic periodontitis?

- A. Chlorhexidine.
- B. Doxycycline.
- C. Nystatin.
- D. Acyclovir.
- E. Isoniazid.

Which of the following statements about dental caries is INCORRECT?

- A. Caries development requires a tooth, saliva, plaque bacteria and dietary carbohydrate.
- B. The earliest clinical evidence of caries is a “white spot” lesion, which is reversible.
- C. Some areas of enamel are more susceptible to demineralization.
- D. Frequency of sugar intake is less important than total consumption.
- E. High salivary or plaque counts of *S. mutans* and *Lactobacillus* spp. may be related to high caries risk.

Tooth 2.5 had nonsurgical root canal treatment performed 10 years ago. The tooth became sensitive to percussion in the last 6 months and the radiograph shows apical rarefaction. What is the most appropriate management?

- A. Prescribe an antibiotic.
- B. Prescribe an analgesic.
- C. Follow-up in 6 months.
- D. Endodontic retreatment.

During an endodontic access preparation on tooth 3.6, a small perforation was produced in the furcation area. What is the most appropriate management?

- A. Immediate seal of the perforation.
- B. Delayed seal of the perforation.
- C. Immediate surgical repair.
- D. Extraction.

Flexing of a fixed partial denture under occlusal loads is

- A. proportional to the cube of the width of its pontics.
- B. linearly proportional to the length of the span.
- C. decreased with the use of a high strength material.

Seating of a fixed partial denture may be hindered if

- A. a void exists on the internal surface of the casting.
- B. the gingival margins are overcontoured.
- C. the gingival margins are open.
- D. the pontic is overcontoured gingivally.

A healthy 38 year old has a well-defined radiolucency 2mm in diameter at the apex of tooth 4.1. The tooth responds within normal limits to all tests performed. What is the most appropriate management?

- A. Extraction.
- B. Apicoectomy.
- C. Incision and drainage.
- D. Follow-up in 6 months.
- E. Open the tooth for drainage.

Which of the following drugs is indicated for the management of a Gram-negative anaerobic infection?

- A. Clotrimazole.
- B. Metronidazole.
- C. Omeprazole.
- D. Sulfamethoxazole.

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While performing a bony tuberosity reduction, the maxillary sinus lining is accidentally perforated. The wound is to be closed with a suture that will resorb in 10-14 days. The suture material that should be used is

- A. polyethylene.
- B. catgut.
- C. chromic catgut.
- D. polylactic acid.

Which of the following is a principle of mucoperiosteal flap design?

- A. The base of the flap should be narrower than the free margin.
- B. The flap margins should be approximated over the bony defect.
- C. The base of the flap should not be under tension.
- D. The height of the flap should be more than the width of the base.

For the extraction of maxillary teeth, the most appropriate position of the maxillary occlusal plane is

- A. parallel to the floor.
- B. 20° to the floor.
- C. 60° to the floor.
- D. 90° to the floor.

A 55 year old has a 12mm diameter well-circumscribed, elevated, palpable mass of normal colour located on the buccal mucosa. After 10 days of observation, an excisional biopsy is going to be performed. What is the appropriate margin of normal tissue to include around the perimeter of the lesion?

- A. 2-3mm.
- B. 4-5mm.
- C. 6-7mm.
- D. 8-9mm.

A patient returns three days following the extraction of a carious mandibular first molar, complaining of a foul smell, bad taste and worsening pain. There is normal post-operative swelling with no evidence of fluctuance or discharge. The most appropriate management is to

- A. incise and drain.
- B. prescribe an antibiotic.
- C. place an intra-socket dressing.
- D. prescribe a muscle relaxant.

For a patient with dementia, aphasia is characterized by a diminished ability to

- A. execute personal oral hygiene tasks.
- B. recognize people.
- C. make decisions.
- D. appreciate the consequences of behaviour.
- E. express ideas or thoughts.

Nonintegration of dental implants in a 76 year old patient taking anti-rheumatic drugs and glucocorticoids is most likely due to

- A. anemia.
- B. immunosuppression.
- C. osteodystrophy.
- D. hyperglycemia.

Combined orthodontic and orthognathic surgical treatments primarily address

- A. dentoalveolar malocclusions.
- B. moderate to severe dentoskeletal discrepancies.
- C. occlusal discrepancies due to multiple tooth loss.
- D. vertical growth anomalies in a prepubescent child.

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A patient returns to his dentist four days following the extraction of a grossly carious 4.6. There is a fluctuant swelling involving the submandibular space. The last time the patient was prescribed penicillin, he developed a generalized rash. What is the most appropriate antibiotic to prescribe?

- A. Metronidazole.
- B. Amoxicillin.
- C. Clindamycin.
- D. Tetracycline.

A patient had a myocardial infarction 6 months ago. Which of the following NSAIDs is most appropriate for the patient?

- A. Ibuprofen.
- B. Naproxen.
- C. Celecoxib.
- D. Ketolorac.

Salbutamol is the most appropriate drug to manage

- A. acute asthma.
- B. angina pectoris.
- C. myocardial infarction.
- D. epilepsy.
- E. vasodepressor syncope.

An elderly female patient with a history of osteoporosis has been taking oral alendronate (Fosamax™) for 4 years. She requires the extraction of tooth 4.5. Which of the following is the most appropriate management?

- A. Proceed with the extraction without adjusting the dose of alendronate.
- B. Use hyperbaric oxygen before and after the extraction.
- C. Order a bone density test.
- D. Discontinue the alendronate preoperatively.

Intensifying screens are used when exposing extraoral analogue radiographic films to

- A. improve detail.
- B. decrease exposure time.
- C. decrease scatter radiation.
- D. increase penetration.

The most serious complication for a patient with Ludwig's angina is a/an

- A. mediastinal sepsis.
- B. septic shock.
- C. optic nerve involvement.
- D. cavernous sinus thrombosis.
- E. airway obstruction.

Which primary molar terminal plane relationship is most likely to develop into an Angle Class II relationship?

- A. Straight.
- B. Distal step.
- C. Mesial step.

With excessive forward mandibular growth in a patient with minimal overjet, the mandibular incisors will most likely

- A. tip labially.
- B. tip lingually.
- C. tip laterally.
- D. remain unchanged.

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During initial endodontic preparation of the apical portion of the canal,

- A. integrity of the apical one third should be maintained.
- B. sodium hypochlorite should be used sparingly.
- C. use the next larger file as soon as a tight fit of the preceding file is achieved.
- D. if there is a canal restriction, enlarge with a wider file.
- E. use Gates-Glidden drills as end-cutting instruments to open the coronal portion of canal.

What is the most stable area for support of a mandibular complete denture?

- A. Retromylohyoid area.
- B. Residual ridge.
- C. Mylohyoid ridge.
- D. Buccal shelf.
- E. Genial tubercle.

Interceptive orthodontic treatment using appliances to treat the effects of oral habits should

- A. start in the primary dentition.
- B. occur during the early to middle mixed dentition.
- C. start at the same time as comprehensive orthodontic treatment.
- D. be delayed until the completion of growth.

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