

ROYAL CIVIL SERVICE COMMISSION
BHUTAN CIVIL SERVICE EXAMINATION (BCSE) 2010
EXAMINATION CATEGORY: TECHNICAL

PAPER III: SUBJECT SPECIALIZATION PAPER FOR DENTISTRY

Date : 24th November 2010
Total Marks : 100
Examination Time : 2.5 Hours
Reading Time : 15 Minutes (Prior to examination Time)

INSTRUCTIONS

1. Write your Roll Number clearly on the answer booklet in the space provided.
2. The first 15 minutes is being provided to check the number of pages, printing errors, clarify doubts and to read the instructions. You are **NOT PERMITTED TO WRITE** during this time.
3. Use either **Blue** or **Black** ink pen or ball point pen for the written part and **H.B. Pencils** for the sketches and drawings.
4. All answers should be written on the Answer Booklet provided. Candidates are not allowed to write anything on the question paper.
5. This Question Booklet consists of **11 pages, including this page**. It is divided into two sections, namely SECTION A and SECTION B.
6. **SECTION A** consists of two parts, **Part I** and **Part II**
Part I consists of 30 multiple choice questions carrying one (1) mark each and is **compulsory**. The answer of your choice should be clearly written **in whole** along with the question and option number on your answer booklet
Part II consists of four (4) short answer questions of five (5) marks each and all questions are **compulsory**
7. **SECTION B** consists of two Case Studies. Choose only ONE case study and answer the questions under your choice. Each case study carries fifty (50) marks in total.

Section A (50 marks)

Answer all questions in Section A

Part I: Multiple choice questions. The answer of your choice should be clearly written in whole along with the question and number on your answer booklet. Each question is worth 1 mark (30 marks).

1. In a child, a fibrous maxillary frenum associated with a diastema between central incisors should be
 - a) Treated by frenectomy
 - b) Observed until permanent canines erupt
 - c) Surgically removed before initiating orthodontic treatment
 - d) Left alone because the condition will self-correct

2. Dental wax pattern should be invested as soon as possible because of danger of
 - a) Distortion due to relaxation of internal stresses
 - b) Drying of wax pattern
 - c) Continued expansion of wax
 - d) Reduction in flow of wax

3. Of the following the most common complication after surgical removal of mandibular tooth is
 - a) Loss of blood clot
 - b) Difficulty in swallowing
 - c) Paraesthesia of lingual nerve
 - d) Post operative haemorrhage

4. Classification of bony defects are most helpful in determining the likelihood of repair after periodontal treatment is based on
 - a) Depth of bone defect
 - b) Number of bone walls involved

- c) Distance between the facial – lingual walls
 - d) Distance from the crest of defect to cemento-enamel junction (CEJ)
5. A major criterion to differentiate between true Class III and pseudo Class III malocclusion
- a) Forward shift of the mandible during closure
 - b) Degree of anterior cross bite
 - c) Presence of bilateral cross bite
 - d) Occlusal relationship between upper and lower molars
6. Glass ionomer cement is composed of
- a) Zinc oxide powder and poly carboxylic liquid
 - b) Zinc oxide powder and phosphoric acid liquid
 - c) Aluminiasilicate powder and poly carboxylic liquid
 - d) Aluminiasilicate powder and phosphoric acid
7. Rapid onset of inhalational general anaesthesia depends on
- a) Blood solubility
 - b) Cerebral blood flow
 - c) Partial pressure of general anaesthesia
 - d) All of the above
8. The most common method to alter the setting of impression paste is
- a) Alter the temperature of glass slab and spatula
 - b) Vigorous mixing helps in sharp reduction of setting time
 - c) Addition of inert oils is most successful way of prolonging setting time
 - d) Addition of a drop of water helps prolong working time and setting time
9. Dilantin hyperplasia is treated with
- a) With gingivectomy
 - b) Gingivoplasty

- c) Apically repositioned flap
 - d) Curettage
10. A Child who had a congenital defect of cleft lip and cleft palate is most likely to suffer from which kind of malocclusion
- a) Bilateral posterior cross bite
 - b) A collapsed anterior mandibular arch
 - c) Protrusion and spacing of maxillary anterior teeth
 - d) Class II Division 1 malocclusion
11. A reliable guide for positioning maxillary anterior teeth in complete denture is
- a) Fovea palatinae
 - b) Incisive papillae
 - c) Maxillary ridge
 - d) Rugae
12. Which of the following respiratory conditions is most alarming during patient sedation in dental clinic?
- a) Apnea
 - b) Dyspnea
 - c) Hyperpnea
 - d) Tachypnea
13. The most common organism causing infective endocarditis following dental manipulation is
- a) Viridians streptococcus
 - b) Staph. Aureus
 - c) Group A streptococci
 - d) Gram –negative rod

14. The major reason for replacement of prematurely lost maxillary primary incisors via a fixed or removable appliance in primary dentition is
- a) Speech, aesthetics and psychological reasons
 - b) Form and function
 - c) Arch perimeter requirements in the transitional dentition
 - d) Incising and mastication
15. The predominant bacterial species associated with localized juvenile periodontitis is:
- a) Eikenella corrodens
 - b) Fusobacterium nucleatum
 - c) Actinomyces comitans
 - d) Eubacterium bacilli
16. An incipient carious lesion on an interproximal surface is usually located
- a) At the contact point
 - b) Facial to the contact point
 - c) Gingival to the contact point
 - d) Lingual to the contact point
17. The best bone graft which can be utilized for reconstruction is:
- a) Costochondral graft
 - b) Calvarial graft
 - c) Iliac crest graft
 - d) Metatarsal bone graft
18. Which of the following dental cement components accelerates the formation of reparative dentin?
- a) Eugenol
 - b) Calcium hydroxide
 - c) Zinc Oxide

d) Silica

19. Which of the following is not considered a host factor for dental caries?

- a) Age
- b) Bacteria
- c) Immunity
- d) Race

20. Which of the following features are of naso-alveolar cyst?

- a) An ovoid shaped radiolucency above the lateral incisor and canine teeth
- b) Erosion of base above lateral incisor and canine teeth
- c) An inverted funnel shaped radiolucent lesion above the roots of lateral incisor and canine teeth
- d) A pear-shaped radiolucent lesion between roots of lateral incisor and canine teeth

21. The most common cause of endodontic failure is

- a) Overfilled canal
- b) Broken instruments
- c) Incomplete obturation
- d) None of the above

22. The primate spaces are related to the position of the diastema that are

- a) distal to the maxillary primary canines and mesial to the mandibular primary canines
- b) mesial to the maxillary primary canines and distal to the mandibular primary canines
- c) distal to both maxillary and mandibular primary canines
- d) mesial to both maxillary and mandibular primary canines

23. Which of the following is a soft tissue cyst which does not produce radiographic changes?

- a) Nasolabial cyst
- b) Nasopalatine cyst
- c) Mid alveolar cyst
- d) Palatine cyst

24. Which of the following is common in all forms of shock?

- a) Sepsis
- b) Hypovolemia
- c) Vaso constriction
- d) Impaired tissue perfusion

25. Which of the following is a nonsteroidal anti-inflammatory agent with a tendency to produce a blood dyscrasis?

- a) Indomethacin
- b) Ibuprofen
- c) Ketorolac
- d) Acetaminophen

26. Trigeminal neuralgia is characterized by

- a) Paralysis of one side of the face
- b) Uncontrollable twitching of one eye
- c) Sharp excruciating pain of short duration
- d) Prolonged episodes of pain on one side of the face

27. The proximal portion of a Class II cavity preparation in a primary molar extends rather deep gingivally. A satisfactory gingival seat may not be obtained because of which of the following?

- a) The primary teeth have a marked cervical constriction
- b) The proximal contact of primary molar is broad and flat
- c) The facial-lingual surface of primary first molar converge occlusally
- d) The enamel rods in the gingival third of the primary first molar extend occlusally

28. Generally, in majority of children the sequence of eruption of permanent teeth in mandible is

- a) 1-6-2-3-5-4-7-8
- b) 6-1-2-4-5-3-7-8
- c) 6-1-2-3-4-5-7-8
- d) 6-1-2-4-3-5-7-8

29. The “V” principle of growth is best illustrated by the

- a) Nasal septum
- b) Ramus of mandible
- c) Mandibular symphysis
- d) Spheno- occipital synchondrosis

30. Primary dentition period is

- a) from birth to 11 years
- b) from 6 months to 11 years
- c) from 6 months to 6 years
- d) from 6 years to 11 years

Section A

Answer all questions in Section A

Part II: Short answer questions (20 marks). Each question is worth 5 marks.

Answer all questions.

1. What are the signs and symptoms of anaphylaxis?
2. What is the role of lactating mother's oral hygiene in the development of early childhood caries?
3. Briefly explain the link between oral diseases and systemic diseases, giving examples.
4. What is the role of fluoride in caries prevention? Explain the action of fluoride in brief.

Section B (50 marks)

Answer any one from the two. Each question carries 50 marks.

1. A 50-year old woman presents to you complaining of dry mouth. Extra orally she appears well looking, no detectable cervical lymphadenopathy. There is no facial asymmetry or enlargement of the parotid glands and the submandibular glands appear normal on bimanual palpation.

Intra orally, her alveolar mucosa appears glazed or translucent or thin (atrophic) suggesting long-standing xerostomia. There are carious lesions at the cervical margins of lower anterior teeth and her tongue is lobulated and fissured.

- a. What are the common and important causes of xerostomia and how are they subdivided?
- b. On the basis of the history and examination which cause is the most likely? Why?
- c. What is Sjogren's syndrome and how may the condition be subclassified?
- d. What simple test differentiates false and true xerostomia?
- e. What salivary flow rate would you consider to indicate xerostomia?
- f. What further investigations are required and why is each performed?
- g. What is your final diagnosis?
- h. How could you contribute to the management of this patient?
- i. What is the significance of the development of salivary gland swelling?

2. A 33-year old man presents with a complaint of pain on biting which is unpredictable, extremely painful and sharp but poorly localized. It originates in the lower right quadrant and lasts a very short time, only as long as the teeth are in contact, and is so painful that he has become accustomed to eating on the left. The pain only arises on biting hard foods or deliberately clenching his teeth. Apart from these sharp electric-like pains he has no other symptoms.

- a. Based on what you know from the history, what are the likely causes? Explain why?
 - b. What additional questions would you ask and why?
 - c. What extra-oral and intra-oral features will you look for? What features of restorations would you note particularly?
 - d. What is your differential diagnosis and why?
 - e. Which tooth would you suspect and why?
 - f. What test and further examinations would you perform to identify the causative tooth?
 - g. What are the treatment options for restoring cracked teeth? What are the advantages and disadvantages of each treatment option?
 - h. If the cracked portion had already been broken off at presentation and the pulp is not involved, what restoration options would you have been open to you?
 - i. Suppose you had not been able to identify the causative tooth using the methods described in (f), what would you try next?
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