

ROYAL CIVIL SERVICE COMMISSION
BHUTAN CIVIL SERVICE EXAMINATION (BCSE) 2015
EXAMINATION CATEGORY: TECHNICAL

PAPER III: SUBJECT SPECIALIZATION PAPER for *Dentistry*

Date	: 11 October 2015
Total Marks	: 100
Examination Time	: 150 minutes (2.5 hours)
Reading Time	: 15 Minutes (prior to examination time)

GENERAL INSTRUCTIONS:

1. Write your Roll Number clearly and correctly on the Answer Booklet.
2. The first 15 minutes is being provided to check the number of pages of Question Paper, printing errors, clarify doubts and to read the instructions. You are NOT permitted to write during this time.
3. This paper consists of **TWO SECTIONS**, namely SECTION A and SECTION B:
 - **SECTION A** has two parts: Part I - 30 Multiple-Choice Questions
Part II - 4 Short Answer Questions
All questions under SECTION A are **COMPULSORY**.
 - **SECTION B** consists of two Case Studies. Choose only **ONE** case study and answer the questions under your choice.
4. All answers should be written with correct numbering of Section, Part and Question Number in the Answer Booklet provided to you. Note that any answer written without indicating any or correct Section, Part and Question Number will NOT be evaluated and no marks would be awarded.
5. Begin each Section and Part in a fresh page of the Answer Booklet.
6. You are not permitted to tear off any sheet(s) of the Answer Booklet as well as the Question Paper.
7. Use of any other paper including paper for rough work is not permitted.
8. You are required to hand over the Answer Booklet to the Invigilator before leaving the examination hall.
9. This paper has 08 printed pages in all, including this instruction page.

GOOD LUCK!

SECTION A

PART I - Multiple Choice Questions (30 Marks)

Choose the correct answer and write down the letter of the correct answer chosen in the Answer Booklet against the question number. E.g. 31 (c). Each question carries ONE mark. Any double writing, smudgy answers or writing more than one choice shall not be evaluated.

- 1. Root development in permanent dentition except third molar is completed by age**
 - a) 16 year
 - b) 14 year
 - c) 12 year
 - d) 18 year

- 2. Difference in tooth preparation for non-carious Class V amalgam and composites**
 - a) depth of cavity
 - b) bevel
 - c) placement of retentive grooves
 - d) mesial and distal walls of the cavity

- 3. The first sensation to be lost following administration of LA**
 - a) proprioception
 - b) pain
 - c) pressure
 - d) temperature

- 4. Order of setting of GIC**
 - a) gelation , migration, post setting contraction
 - b) migration gelation , post setting contraction
 - c) post setting contraction, gelation, migration
 - d) none of above

- 5. In order to increase the efficiency of tungsten carbide burs, it**
 - a) should run only after touching the tooth
 - b) run at high speed before touching the tooth
 - c) run at low speed before touching the tooth
 - d) run before entering the oral cavity

- 6. The commonest site of oral keratoacanthoma**
 - a) lip
 - b) palate
 - c) buccal mucosa
 - d) tongue

- 7. In a deep wound, width is more than depth. It is a**
- a) stab wound
 - b) slash
 - c) laceration
 - d) puncture
- 8. When does TMJ start developing in utero**
- a) 2nd week
 - b) 10th week
 - c) 20th week
 - d) 29 week
- 9. When pins are used in amalgam, strength of amalgam**
- a) increases slightly
 - b) increases drastically
 - c) decreases
 - d) remains same
- 10. A patient with trauma suffers 15% blood loss, the appropriate step is**
- a) blood and colloidal transfusion
 - b) blood transfusion only
 - c) colloidal transfusion only
 - d) no treatment
- 11. Adams clasp is known by many synonyms EXCEPT**
- a) Liverpool clasp
 - b) Jackson's clasp
 - c) Universal clasp
 - d) Modified arrowhead clasp
- 12. The most commonly accepted theory of the mechanisms of dentinal sensitivity is:**
- a) Direct innervation theory
 - b) Odontoblast receptor theory
 - c) Hydrodynamic theory
 - d) Pulpal pressure theory
- 13. If the acronym for AIDS is acquired immunodeficiency syndrome, the same for DMFT is**
- a) Dental Missing Fracture Tooth
 - b) Dentally Missing Filled Tooth
 - c) Decay Must be Filled Totally
 - d) Decayed, Missing and Filled Tooth

14. In inflammation of periodontal tissue, edema is most likely responsible for

- a) alteration in contour of free gingiva
- b) alteration in color of free gingiva
- c) presence of pain
- d) bone loss

15. The characteristic lesion of herpes virus infections on the skin or mucous membrane in humans is

- a) necrosis
- b) tumefaction
- c) hyperkeratosis
- d) vesicles

16. The total volume of free water in average human being

- a) 40 L
- b) 50 L
- c) 60 L
- d) 30L

17. The characteristic feature of apoptosis on light microscopy is

- a) cellular swelling
- b) nuclear compaction
- c) intact cell membrane
- d) cytoplasmic eosinophilia

18. Which one of the following cysts occur in an extraosseous location

- a) nasoalveolar
- b) nasopalatine
- c) median palatal
- d) globulomaxillary

19. The planned and progressive extraction procedure popularized by Nance during the 1940s in the United States of America involves

- a) extraction of some primary teeth
- b) extraction of some permanent teeth
- c) extraction of some primary and permanent teeth
- d) extraction of some canines and molars

20. Surgery is carried out in which phase of general anesthesia

- a) Plane I
- b) Plane II
- c) Plane III
- d) Plane IV

- 21. The most common sequence of eruption of permanent maxillary teeth**
- a) 1-6-2-3-4-7-5-8
 - b) 6-1-2-4-3-5-7-8
 - c) 2-3-1-6-7-5-4-8
 - d) 6-1-2-3-4-5-7-8
- 22. Which of the following is most commonly used fixative in diagnostic pathology**
- a) formaldehyde
 - b) ethyl alcohol
 - c) mercuric chloride
 - d) picric acid
- 23. Severe throbbing tooth pain which increases when the patient bends or 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) pulp hyperemia
- 24. The most appropriate prophylactic antibiotic for a patient with mitral valve prolapse with regurgitation undergoing a dental surgical procedure is**
- a) intravenous ampicillin.
 - b) clindamycin per os.
 - c) erythromycin per os.
 - d) amoxicillin per os.
- 25. Which of the following is most resistant to antiseptics**
- a) spore
 - b) prion
 - c) cyst
 - d) fungus
- 26. 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
- 27. The preconditioning of all ceramic restoration prior to bonding is achieved by**
- a) sand blasting
 - b) etching with phosphoric acid and degrease with acetone
 - c) roughening surface with diamond bur
 - d) acid etching with hydrofluoric acid

28. Endodontic treatment can be mainly divided into three phases EXCEPT

- a) biomechanical preparation
- b) disinfection
- c) periapical surgery
- d) obturation

29. When 2 teeth have reversed their position, it is

- a) interchange
- b) transposed
- c) imbrications
- d) misplaced

30. Which one of the following is a possible cause for the low density radiograph (light film)

- a) cold developer
- b) over exposure
- c) improper safety light
- d) excessive developing time

PART II – Short Answer Type Questions (20 Marks)

Answer ALL the questions. Each question carries 5 marks. Mark for each sub-question is indicated in the brackets.

1. What is tooth wear or regressive dental changes? Briefly differentiate between attrition, abrasion and erosion. ($\frac{1}{2}+1\frac{1}{2}+1\frac{1}{2}+1\frac{1}{2}$).
2. Define pericoronitis. What are the possible causes of this condition and how would you manage it? (1+2+2).
3. What do you mean by neoplasia? Differentiate between malignant and benign neoplasia with a minimum of five points. (1+4).
4. Draw a well labelled schematic diagram to show how radiation is produced in a dental x-ray machine. What are the various ways to prevent or minimize radiation hazards to both the patient and the operator? (3+2).

SECTION B

Case Study

Choose either Case 1 or Case 2 from this Section. Each Case carries 50 marks. Mark for each sub-question is indicated in the brackets.

Case 1

A middle age woman, after having seen a doctor and a dental hygienist, comes to your clinic to seek second opinion for her right sided facial pain, which involved around the ear as well. She has reportedly been to an ophthalmologist for “funny eye feeling” on the same side but he gave her a clean chit. The present condition was also giving her jaw pain, sagging mouth corner and tongue numbness on the same side. Orally, she also complains of halitosis often. The hygienist had prescribed some medications two days ago but to no avail. Except having cough 10 days ago, other medical history was noncontributory. On dental examination, plaque was minimal; tooth #36 was carious with a sinus tract buccally. All soft tissues in the oral cavity were within normal limits.

- a) In your assessment of the case, what is her chief complaint and why? (1+1)
- b) What is your differential diagnosis?(4)
- c) How would you reach to a definite diagnosis of this case?(2)
- d) List some clinical features of this case after having reached to a diagnosis?(5)
- e) What are the extra and intracranial causes of such a disease?(6)
- f) What would be your treatment for this case?(4)
- g) What are its prognosis and some possible residual effect? (1+2)
- h) Name the VIIth. cranial nerve. Is it a motor or sensory nerve? (1+1)
- i) List the nerves that supply the tongue? (5)
- j) Define halitosis? How many types are there and how would you treat this common condition?(1+6)
- k) What are the possible ways to control dental plaque? (4)
- l) When does # 36 erupt and is it an accessional tooth? Enumerate treatment options for this diseased tooth.(2+4)

OR

Case 2

Imagine yourself to be in a dental college doing your internship, when a 38-year-old male patient presents himself with a prominence of the left side of lower jaw. Intraoral examination revealed a large swelling of the mandible extending from approximately the cuspid to the molar region. The jaw was edentulous in that region. Digital manipulation of the enlarged portion of the mandible resulted in a crepitation sound almost similar to that of crackling parchment. IOPA and occlusal radiographs revealed a large cyst causing buccal expansion and thinning of the cortical plate. Luckily for this patient, spontaneous fracture of the jaw had not occurred.

- a) What are the cardinal signs of inflammation/swelling? (5)
- b) From which branchial arch is lower jaw derived?(1)
- c) Define cyst. What are dentigerous and nondentigerous cysts?(1+6)
- d) Give differential diagnosis of this cystic swelling.(5)
- e) What are the investigative procedures for the jaw cysts?(5)
- f) Name the cyst in this patient and justify your diagnosis.(1+5)
- g) How would you manage this type of cyst surgically?(9)
- h) What are the complications of jaw cysts? (2)
- i) Differentiate between ameloblastoma and the cyst. (5)
- j) Draw mandibular bone and indicate weak spots where fracture is likely to take place. (5)

