

**ROYAL CIVIL SERVICE COMMISSION
BHUTAN CIVIL SERVICE EXAMINATION (BCSE) 2025
EXAMINATION CATEGORY: TECHNICAL**

PAPER III: SUBJECT SPECIALIZATION PAPER DENTAL SURGERY

Date	:	October 11, 2025
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 **8 Printed pages** in all, including this instruction page.

BEST OF 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 (a). Each question carries ONE Mark. Any double writing, smudgy answers or writing more than one choice shall not be evaluated.

1. Which of the following bacteria is most commonly associated with dental caries?
 - a) Streptococcus pyogenes
 - b) Streptococcus mutans
 - c) Lactobacillus
 - d) Staphylococcus aureus
2. Which tooth is most commonly involved in dens invaginatus?
 - a) Mandibular first molar
 - b) Maxillary central incisor
 - c) Maxillary lateral incisor
 - d) Mandibular canine
3. The most common cause of pulpitis is:
 - a) Trauma
 - b) Periodontal disease
 - c) Dental caries
 - d) Attrition
4. What is the safe dose of Lidocaine with epinephrine for an adult (mg/kg)?
 - a) 3 mg/kg
 - b) 5 mg/kg
 - c) 7 mg/kg
 - d) 10 mg/kg
5. The key hormone in calcium homeostasis is:
 - a) Thyroxine
 - b) Parathyroid hormone
 - c) Calcitonin
 - d) Insulin
6. The most common cyst found in the jaws is:
 - a) Dentigerous cyst
 - b) Radicular cyst
 - c) Odontogenic keratocyst
 - d) Nasopalatine cyst
7. Which of the following is a sign of irreversible pulpitis?
 - a) Cold sensitivity that resolves
 - b) Pain on biting
 - c) Spontaneous pain
 - d) Thermal sensitivity only

8. A butterfly-shaped rash is commonly seen in:
 - a) Psoriasis
 - b) Systemic lupus erythematosus
 - c) Eczema
 - d) Pemphigus vulgaris
9. A primary tooth with furcal radiolucency likely has:
 - a) Enamel hypoplasia
 - b) Pulp necrosis
 - c) Pericoronitis
 - d) Physiologic root resorption
10. Which cranial nerve supplies the muscles of mastication?
 - a) Facial nerve
 - b) Hypoglossal nerve
 - c) Trigeminal nerve
 - d) Glossopharyngeal nerve
11. The most common cause of dry socket is:
 - a) Bacterial infection
 - b) Excessive bleeding
 - c) Loss of blood clot
 - d) Antibiotic overuse
12. The pulp of the tooth originates from:
 - a) Ectoderm
 - b) Endoderm
 - c) Neural crest
 - d) Mesoderm
13. A high-pitched metallic sound on percussion of a tooth may indicate:
 - a) Apical periodontitis
 - b) Hyper cementosis
 - c) Ankylosis
 - d) Reversible pulpitis
14. Which vitamin deficiency causes scurvy?
 - a) Vitamin A
 - b) Vitamin B1
 - c) Vitamin C
 - d) Vitamin D
15. The junction between the crown and the root is called:
 - a) Alveolar crest
 - b) Cemento-enamel junction
 - c) Apical foramen
 - d) Periodontal ligament

16. The main function of the periodontal ligament is to:
- a) Supply blood to the pulp
 - b) Anchor tooth to alveolar bone
 - c) Secrete dentin
 - d) Prevent caries
17. The preferred antibiotic for odontogenic infection is:
- a) Ciprofloxacin
 - b) Metronidazole
 - c) Amoxicillin
 - d) Tetracycline
18. Taurodontism is best diagnosed by:
- a) Clinical examination
 - b) Pulp testing
 - c) Radiograph
 - d) Tooth mobility test
19. Which of the following has the highest fluoride concentration?
- a) Fluoride varnish
 - b) Fluoridated water
 - c) Fluoride mouth rinse
 - d) Toothpaste
20. Which is the most radiopaque dental material?
- a) Composite
 - b) Gutta-percha
 - c) Zinc oxide eugenol
 - d) Amalgam
21. The leeway space in permanent dentition is:
- a) Greater in maxilla
 - b) Greater in mandible
 - c) Equal in both arches
 - d) Not clinically relevant
22. Which malocclusion is characterized by anterior crossbite and prognathic mandible?
- a) Class I
 - b) Class II div 1
 - c) Class II div 2
 - d) Class III
23. The best method to diagnose a vertical root fracture is:
- a) Thermal test
 - b) Radiograph
 - c) Cone beam CT
 - d) Percussion

24. Which fluoride compound is commonly used in community water fluoridation?
- a) Sodium fluoride
 - b) Calcium fluoride
 - c) Tin fluoride
 - d) Ammonium fluoride
25. The most common cause of gingival bleeding is:
- a) Vitamin K deficiency
 - b) Trauma
 - c) Plaque-induced gingivitis
 - d) Periodontitis
26. The most reliable indicator of past caries experience is:
- a) DMFT score
 - b) Saliva test
 - c) Fluoride intake
 - d) Oral hygiene index
27. Which tooth is most commonly impacted?
- a) Maxillary lateral incisor
 - b) Maxillary first premolar
 - c) Mandibular second premolar
 - d) Mandibular third molar
28. The best time for oral health education is:
- a) At the time of treatment
 - b) After treatment
 - c) Before disease occurs
 - d) When patient complains
29. Crossbite correction is ideally done at:
- a) Adult stage
 - b) Late mixed dentition
 - c) Primary dentition
 - d) Permanent dentition
30. The pain from a cracked tooth is usually:
- a) Constant and dull
 - b) Spontaneous
 - c) Sharp on biting pressure
 - d) Triggered only by cold

PART II: Short Answer Questions (20 Marks)

Answer ALL four Questions. Each question carries 5 marks.

1. What do you understand by “Morsicatio Buccarum”? State the etiologies of morsicatio Buccarum? Explain the consequences of such untreated condition. **(5 marks)**
2. What is Removable Orthodontics? List 3 common conditions that can be treated with removable orthodontics and the appliances used? **(5 marks)**
3. If a patient with a persistent oozing from an infected mandibular first molar visits with a draining sinus on the cheek? What would be your differential diagnosis and how will you approach for management? **(5 marks)**
4. What is a “dentifrice”? Have you heard of “fluoride”? If yes, does it have any role in caries prevention, how? What are the different forms of fluoride available in the world and in Bhutan? **(5 marks)**

SECTION B (50 Marks)

CASE STUDY

*Choose either Case I or Case II from this Section. Each case carries **50 Marks**.*

Mark for each sub-question is indicated in the brackets.

CASE I

A 70 year old man comes to your clinic with blistering mouth and skin lesions that started suddenly 10 days ago and increased progressively over the time. He states that it started as blisters and vesicles on the mouth and skin on the trunk, thighs and genitalia. No intact blisters were found in the oral cavity as it had already ruptured leaving behind only ulcerations. He thinks that he has oral cancer and he will not be able to live a normal life again. He gives a history of hypertension, type 2 diabetes mellitus and rheumatoid arthritis and has taken medicines like systemic steroid (prednisolone) and methotrexate for many years. He has stopped all the medicines since last 2 years (not on any medications now). Answer the questions based on this complaint of the patient (complaint based treatment):

1. Name some common vesiculo- bullous lesions/ diseases (autoimmune, inflammatory and infectious)? **(5 marks)**
2. Give your differential diagnosis with justifications in this patient? **(5 marks)**
3. Give a detailed history taking in this patient as you think relevant? **(5 marks)**
4. What investigations will you do for this patient? Give justifications for your investigations? **(10 marks)**
5. What is Nikolsky's sign? How do you do it? What is the Gold standard investigation to establish proper diagnosis in such a case? Have you heard of immune-fluorescent studies, what can you see in this study? How is (direct immune- fluorescent study)DIF done? **(10 marks)**
6. Enlist your management protocol in this patient? **(10 marks)**
7. Will you manage this patient with cortico-steroids (steroids)? If so, what type of steroids will you use: mention your treatment plan? **(5 marks)**

CASE II

A young women came to your clinic for a wisdom tooth extraction. After taking her dental history, you examined her tooth condition and advised that she should extract her tooth as it might give her repeated problems later on. The patient after carefully listening to you agreed to undergo the extraction. Now, you are prepared for extraction but somehow, after little over 5minutes of giving her the required Lignocaine Local Anesthesia block, your patient became unresponsive and fainted on the dental chair.

1. What is this condition commonly called? **(2 marks)**
2. What is the percentage of Lignocaine used for Dental LA and what is the maximum dose you can administer to your patient? **(2 marks)**
3. What is the ratio of Adrenaline: Lignocaine commonly used in dental LA? **(2 marks)**
4. What do you understand by “exodontia”? Explain. **(2 marks)**
5. Was history taking complete? If not what else should have been taken additionally? **(2 marks)**
6. How do you manage the above case of fainting? **(5 marks)**
7. What sort of complications do you need to rule out in this patient immediately?**(5 marks)**
8. What are the complications of extraction: Mention all the complications that can occur
 - a. Pre-operatively. **(5 marks)**
 - b. During operation. **(5 marks)**
 - c. Post operatively. **(5 marks)**
9. How do you go about managing a post extraction bleeding case that comes to you after about one/two hours of extraction? What prophylaxis would you give if your patient has mitral valve prosthesis? **(5 marks)**
10. Classify different types of 3rd molar impactions with diagrams if required? State the mechanism of action of local anesthesia? **(5 marks)**
11. What is alveolar osteitis? Is it manageable at our set up? Explain how do you manage a case of Post extraction dry socket? **(5 marks)**

TASHI DELEK