

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**SELECTION EXAMINATION IN MD (RESTORATIVE DENTISTRY) –**  
**SEPTEMBER/OCTOBER 2018**

**Date:-** 3<sup>rd</sup> October 2018

**Time:-** 2.00 p.m. – 4.00 p.m.

**PAPER I**

Answer two (02) questions from each part.  
Answer each question in a separate book.

**PART A (GENERAL ANATOMY)**

1.
  - 1.1. Describe the extent and anatomical relations of the cavernous sinus. (40 marks)
  - 1.2. Describe the communications of cavernous sinus indicating their clinical relevance. (40 marks)
  - 1.3. Outline the innervation and blood supply of the maxillary sinus. (20 marks)
2.
  - 2.1. In respect of the infratemporal fossa
    - 2.1.1. state the boundaries (15 marks)
    - 2.1.2. describe its communications indicating the openings and structures passing through. (20 marks)
    - 2.1.3. explain the clinical significance. (40 marks)
  - 2.2. Describe the parasympathetic supply of the parotid gland. (25 marks)
3.
  - 3.1. State the intrinsic laryngeal muscles that attach to the hyaline cartilages of the larynx. (15 marks)
  - 3.2. Explain how the muscles mentioned in 3.1. help in the movement of vocal cords. (35 marks)
  - 3.3. Describe the paraluminal spaces indicating their clinical relevance. (50 marks)

**PART B (DENTAL ANATOMY)**

- 4.
- 4.1. Describe the factors that contribute for the stability of Temporomandibular Joint (TMJ). (50 marks)
- 4.2. Describe the innervation of TMJ. (25 marks)
- 4.3. Describe the lymphatic drainage of the tongue. (25 marks)
- 5.
- 5.1. Describe the structure of following junctions in the oral mucosa:
- 5.1.1. Mucocutaneous (10 marks)
- 5.1.2. Mucogingival (15 marks)
- 5.1.3. Dentogingival (25 marks)
- 5.2. Explain how the knowledge mentioned in 5.1.3. is important in clinical practice. (50 marks)
- 6.
- 6.1. Compare and contrast the enamel and dentine formation. (40 marks)
- 6.2. Describe the common dental anomalies which may occur during different stages of tooth development. (40 marks)
- 6.3. Outline the age changes of periodontal ligament. (20 marks)

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**Date :-** 4<sup>th</sup> October 2018

**Time :-** 2.00 p.m. – 4.00 p.m.

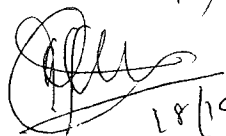
**PAPER II**

Answer two (02) questions from each part.  
Answer each question in a separate book.

**PART A (PHYSIOLOGY)**

1.
  - 1.1. Explain the compensatory mechanisms that operate in the human body in low environmental temperature. (45 marks)
  - 1.2. Explain how the compensatory mechanisms respond to control the core temperature in a patient with a viral fever. (55 marks)
2.
  - 2.1. Explain the forces that act across the capillary membrane in forming extracellular fluid. (30 marks)
  - 2.2. Describe how localized oedema occurs in the following situations:
    - 2.2.1. Tissue trauma (40 marks)
    - 2.2.2. Lymphatic obstruction (30 marks)
3.
  - 3.1. Explain the role of following brain areas in the control of mastication
    - 3.1.1. Cortex (25 marks)
    - 3.1.2. Limbic system (20 marks)
  - 3.2. Explain how masticatory difficulty would occur in a patient with
    - 3.2.1. ataxia (35 marks)
    - 3.2.2. myasthenia gravis (20 marks)

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**PART B (PATHOLOGY)**

4.
  - 4.1. Explain the mechanisms of wound healing. (40 marks)
  - 4.2. State the factors that may delay wound healing. (20 marks)
  - 4.3. Explain the role of the clinician and patient in facilitating wound healing. (40 marks)
  
5. A 25-year-old man collapses 15 minutes after consuming a prophylactic dose of amoxicillin. Prior to collapsing he complained of itching and difficulty in breathing, swallowing and speaking.
  - 5.1. Explain the pathological process that leads to collapse of the patient. (40 marks)
  - 5.2. Outline the reasons for itching and difficulty in breathing, swallowing and speaking. (30 marks)
  - 5.3. State the medications used to manage the above condition in an order of priority. (10 marks)
  - 5.4. State the rationale of the use of the medication stated in 5.3. (20 marks)
  
6. A 60-year-old man presented to a surgical casualty ward with oedema of the legs. His blood pressure on admission was 220/130mmHg. The random blood sugar at the time of admission was 20mmol/L. On examination his right leg was found to be red, warm and swollen.
  - 6.1. Considering the given history, discuss three (03) possible pathological mechanisms for the swelling of his right leg. (60 marks)
  - 6.2. Explain the pathogenesis of the redness of the right leg. (40 marks)