

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

**SELECTION EXAMINATION IN MD (ORTHODONTICS)**  
**OCTOBER 2013**

**Date :- 9<sup>th</sup> October 2013**

**Time :- 1.00 p.m. – 4.00 p.m.**

**PAPER 1.2**

Answer three (03) questions from each part.

Answer each question in a separate book.

**PART A (GENERAL ANATOMY)**

1.
  - 1.1. Describe the attachments of mylohyoid and buccinator muscles. (40 marks)
  - 1.2. Explain how the above mentioned muscle attachments influence the spread of odontogenic infections. (60 marks)
2.
  - 2.1. State the boundaries of the carotid triangle. (20 marks)
  - 2.2. List the nerves and vessels present in the carotid triangle. (40 marks)
  - 2.3. Describe the extracranial course of one of the cranial nerves mentioned in.2.2. (40 marks)
3.
  - 3.1. Describe the postnatal growth of the mandible. (50 marks)
  - 3.2. Explain how variations in postnatal growth of the mandible affects the
    - 3.2.1. development of malocclusion (25 marks)
    - 3.2.2. management of a patient with malocclusion (25 marks)
4.
  - 4.1. Describe the cartilaginous structure and muscle arrangement of the larynx. (40 marks)
  - 4.2. Outline the blood supply, nerve supply and lymphatic drainage of the larynx. (40 marks)
  - 4.3. State how the knowledge of nerve supply of larynx is important in clinical practice. (20 marks)

**PART B (DENTAL ANATOMY)**

- 5.
- 5.1. List the factors that influence the reparative response of the dentine-pulp complex. (30 marks)
- 5.2. Explain how the factors mentioned in 5.1 respond in reparative process of the dentine-pulp complex. (30 marks)
- 5.3. Explain how the age changes in the dentine-pulp complex
- 5.3.1. render it more resistant to environmental injury. (20 marks)
- 5.3.2. decrease the ability to repair itself. (20 marks)
- 6.
- 6.1. List the factors that cause delayed tooth eruption. (30 marks)
- 6.2. Explain what is meant by mesial (approximal) drift of teeth. (20 marks)
- 6.3. State the forces that cause the mesial drift. (30 marks)
- 6.4. Explain how the understanding of mesial drift helps in clinical practice. (20 marks)
- 7.
- 7.1. List the "ideal" occlusal features of primary dentition. (10 marks)
- 7.2. Describe how the features you mentioned in 7.1 would contribute to the development of normal occlusion of permanent dentition. (60 marks)
- 7.3. State the aetiological factors that lead to development of malocclusion. (30 marks)

Contd.../3-

8. In respect of postnatal growth of the craniofacial complex

- 8.1. State the sites/locations of growth. (20 marks)
- 8.2. State the type of growth which occurs at the sites/locations mentioned in 8.1. (20 marks)
- 8.3. Describe the postnatal growth of the maxilla. (40 marks)
- 8.4. Explain how the knowledge of postnatal growth of maxilla is important in clinical practice. (20 marks)

(05) - 07.11.2013 (1.2.3) (1.3) ✓

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**SELECTION EXAMINATION IN MD ((ORAL & MAXILLOFACIAL**  
**SURGERY) MD (RESTORATIVE DENTISTRY), MD (ORTHODONTICS)**  
**OCTOBER 2013**

**Date :- 10<sup>th</sup> October 2013**

**Time :- 9.00 a.m. – 12.00 noon**

**PAPER II**

Answer three (03) questions from each part.  
Answer each question in a separate book.

**PART A (PHYSIOLOGY)**

1.
  - 1.1. Explain the Starling's forces acting on the capillary membrane. (25 marks)
  - 1.2. Explain the causation of oedema in the following conditions based on your answer to 1.1.
    - 1.2.1. Venous obstruction (15 marks)
    - 1.2.2. Hypoproteinaemia (15 marks)
    - 1.2.3. Hypersensitivity reaction (15 marks)
  - 1.3. Explain the physiological basis for the use of calcium channel blockers in cardiovascular disease. (30 marks)

Contd..../2-

2.

2.1. Compare and contrast

2.1.1. "upper motor neuron lesion" and "lower motor neuron lesion".  
(20 marks)

2.1.2. "competitive neuromuscular junction blocker" and "non-competitive neuromuscular junction blocker".  
(20 marks)

2.2. Explain the physiological basis for the use of opioid peptides in pain management.  
(30 marks)

2.3. Explain the physiological basis of "cough reflex".  
(30 marks)

3.

3.1. Describe the functions of adrenal steroids.  
(40 marks)

3.2. Discuss the physiological basis of using steroids in clinical practice.  
(40 marks)

3.3. Outline the complications of steroid usage.  
(20 marks)

4.

4.1. List the functions of the liver.  
(20 marks)

4.2. List the clinical features of liver failure.  
(30 marks)

4.3. Explain the physiological basis of the clinical features listed in 4.2.  
(50 marks)

Contd.../3-

**PART B (PATHOLOGY)**

- 5.
- 5.1. Explain the role of p53 gene and Retinoblastoma gene in cell cycle control and carcinogenesis. (50 marks)
- 5.2. "Angiogenesis is an important event in carcinogenesis"  
Discuss the above statement. (25 marks)
- 5.3. Describe the ways in which oncogenic viruses contribute to carcinogenesis. (25 marks)
- 6.
- 6.1. Discuss the role of macrophage in chronic inflammation. (50 marks)
- 6.2. Explain the effects of inflammatory process in the progression of periodontal disease. (50 marks)
- 7.
- 7.1. State how you would minimize surgical site infections in your practice. (30 marks)
- 7.2. Discuss the significance of opportunistic infections seen in clinical practice. (30 marks)
- 7.3. List the steps you would take to protect you, your staff and the patients from cross infections. (20 marks)
- 7.4. List the effects ~~on~~ of nosocomial infections on health care delivery system (20 marks)
- 8.
- 8.1. Define the term "cyst" (10 marks)
- 8.2. List five (05) different mechanisms of cyst formation giving appropriate clinical examples. (20 marks)
- 8.3. State how a cyst differs from an abscess. (20 marks)
- 8.4. List histopathological differences between an acute and a chronic abscess. (20 marks)
- 8.5. A patient presented with multiple small abscesses in the submandibular region of two months duration.  
List five (05) conditions to be considered in the differential diagnosis. (30 marks)

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10/10/2013