

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (ORTHODONTICS) –
SEPTEMBER 2016

SAO PAPER

Date :- 8th September 2016

Time :- 9.00 a.m. – 11.00 a.m.

Answer all questions in Part A, B, C and D.
Answer each question in a separate book.

PART A

1.
 - 1.1. Describe the arrangement of structures in the intercostal space and indicate their functional and clinical significance. (60 marks)
 - 1.2. Outline the neural pathways involved in the taste-salivatory reflex. (40 marks)
2.
 - 2.1. Outline the arrangement of deep cervical fascia in the neck. (60 marks)
 - 2.2. Explain how the arrangement of deep cervical fascia is important in clinical practice. (40 marks)

PART B

3.
 - 3.1. Define the term “compensation” in malocclusion. (10 marks)
 - 3.2. How does mandibular skeletal compensation occur in Class II division I malocclusion? (30 marks)
 - 3.3. How does dentoalveolar compensation occur in hyperdivergent (long face) patients? (30 marks)
 - 3.4. In the process mentioned in 3.3. either an anterior open bite or a curve of Spee in mandibular arch is established. How does this happen? (25 marks)
 - 3.5. List five (05) other causes of anterior open bite. (05 marks)

- 4.
- 4.1. Outline the steps involved in the development of the root complex of a multi rooted tooth. (40 marks)
- 4.2. In respect of the epithelial cell rests of Malassez describe its
 - 4.2.1. Structure (20 marks)
 - 4.2.2. Location (20 marks)
 - 4.2.3. Role in maintaining the periodontium (20 marks)

PART C

- 5.
- 5.1. List four (04) chemical factors that affect respiration. (20 marks)
- 5.2. State how one of the factors mentioned in 5.1 affects respiration. (30 marks)
- 5.3. State the compensatory physiological changes that develop during acclimatization to high altitude. (50 marks)
6. State the physiological basis of the following observations.
 - 6.1. Flaccid paralysis in a patient with a lower motor neuron lesion involving the facial nerve. (20 marks)
 - 6.2. A skeletal muscle contracts when it is stretched but it spontaneously relaxes with excessive tension. (20 marks)
 - 6.3. Minor bleeding from oral mucosa of a healthy young child arrests spontaneously. (20 marks)
 - 6.4. High reticulocyte count in a woman presented with paleness, fatigue, weakness and shortness of breath. (20 marks)
 - 6.5. A patient with sepsis developing septic shock. (20 marks)

Contd...../3-

PART D

7.

7.1. Outline the importance of inflammation in wound healing. (20 marks)

7.2. State the role of endothelium in wound healing. (20 marks)

7.3. List two (02) complications of wound healing, giving reasons and the impact of these complications. (20 marks)

7.4. State the form of healing in following injuries giving reasons. (20 marks)

7.4.1. Heart following myocardial infarction.

7.4.2. Lacerated wound of the face following road traffic accident.

7.5. State the reasons for delay in healing in the following situations. (20 marks)

7.5.1. Healing following dental extraction who had radiotherapy for a malignancy of cheek.

7.5.2. Healing of compound fracture of the mandible.

8.

8.1. Describe the structure of a virus. (15 marks)

8.2. State two (02) similarities and two (02) differences between virus and bacteria. (20 marks)

8.3. State five (05) viral diseases manifested in orofacial region according to the following format. (25 marks)

Name of the virus - Disease - Orofacial manifestation

8.4. While treating a "high risk" patient a clinician sustained a needle stick injury.

8.4.1. List five (05) examples for "high risk" patients. ^{10 marks} ~~(15 marks)~~

8.4.2. Outline the short and long term management of a needle stick injury. ~~(15 marks)~~

30 marks