

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (ORTHODONTICS)
SEPTEMBER 2014

SAO PAPER

Date :- 12th September 2014

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. State the embryonic structure that forms the tongue muscles. (10 marks)
 - 1.2. List the muscles of the tongue. (20 marks)
 - 1.3. Explain how the nerve supply of the tongue is related to its embryological development. (70 marks)
- 2./
- 2.1. List the structures that form the masticatory apparatus. (20 marks)
 - 2.2. State the sites of attachment of the muscles mentioned in 2.1 to the mandible. (40 marks)
 - 2.3. Explain how the muscles mentioned in 2.1 help in the movements of the mandible. (40 marks)

Contd.../2-

PART B

3. ✓
- 3.1. Explain the term physiological tooth movement. (20 marks)
- 3.2. Describe the tissue response to orthodontic tooth movement. (80 marks)
4. ✓
- 4.1. State the time at which the following occur
- 4.1.1. Initiation of mineralization of the mandibular permanent first molar. (05 marks)
- 4.1.2. Root completion of maxillary permanent canine. (05 marks)
- 4.2. Outline the morphological features of the mandibular permanent first molar. (30 marks)
- 4.3. Name three (03) anatomical structures other than teeth and supporting tissues seen in intra oral radiographs. (15 marks)
- 4.4. State the location, radiological appearance and clinical significance of structures mentioned in 4.3. (20 marks)
- 4.5. Name four (04) commonly used radiographs in dental practice giving two (02) different indications for each type. (25 marks)

PART C

- 5.
- 5.1. Explain the term ventilation-perfusion ratio. (30 marks)
- 5.2. Describe the physiological changes that occur during moderate exercise in the
- 5.2.1. cardiovascular system. (40 marks)
- 5.2.2. respiratory system. (30 marks)

Contd.../3-

- 6.1. What is the glomerular filtration rate (GFR) in an average healthy adult? (10 marks)
- 6.2. What changes would you expect to see in GFR in the following conditions?
- 6.2.1. Renal artery stenosis.
- 6.2.2. Ureteric obstruction.
- 6.2.3. Nephrotic syndrome. (45 marks)
- 6.3. Explain the basis of the changes mentioned in 6.2. (45 marks)

PART D

- 7.1. Define chronic inflammation. (10 marks)
- 7.2. Outline the pathogenesis of chronic inflammation. (40 marks)
- 7.3. List different histomorphological appearances of chronic inflammation, citing examples. (20 marks)
- 7.4. Enumerate the effects of chronic inflammation. (20 marks)
- 7.5. Outline different ways of demonstrating microorganisms in a tissue affected by a chronic inflammatory process. (10 marks)
- 8.1. What is immunity? (10 marks)
- 8.2. State how immunity is acquired giving examples. (20 marks)
- 8.3. Describe primary and secondary immune responses. (30 marks)
- 8.4. "The disease pattern seen in immuno-compromised patients is unique."
Comment on this statement giving clinical examples from the head and neck region. (40 marks)