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2018

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (ORTHODONTICS)
SEPTEMBER/OCTOBER 2018

Date :- 3rd October 2018

Time :- 2.00 p.m. – 4.00 p.m.

SAQ/SEQ PAPER

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

PART A (GENERAL ANATOMY)

1.
 - 1.1. Describe the nerve supply of the face using a diagram. (50 marks)
 - 1.2. Outline the central connections of the nerves mentioned in 1.1. (30 marks)
 - 1.3. Explain how the knowledge mentioned in 1.2 is important in clinical practice. (20 marks)

2.
 - 2.1. Outline the embryonic development of the palate and indicate the effects of its malformations. (40 marks)
 - 2.2. List the muscles which form the soft palate. (20 marks)
 - 2.3. Describe how the muscles mentioned in 2.2. are arranged to perform the functions of the soft palate. (40 marks)

PART B (DENTAL ANATOMY)

- 3.
- 3.1. State the different types of cells that are involved in homeostasis of the periodontal ligament (PDL). (20 marks)
 - 3.2. Explain the role of the PDL in eruption of teeth. (20 marks)
 - 3.3. State the histological changes that take place in the periodontium during the initial phase of orthodontic tooth movement. (20 marks)
 - 3.4. Explain why special caution should be taken in orthodontic treatment
 - 3.4.1. of patients suffering from periodontal diseases. (20 marks)
 - 3.4.2. in adults over 40 years. (20 marks)
- 4.
- 4.1. Explain the various constituent layers of a growing craniofacial suture with the aid of a diagram. (30 marks)
 - 4.2. State the functional significance of the layers mentioned in 4.1. (45 marks)
 - 4.3. Giving reasons state why craniofacial sutures are considered as growth sites but not growth centers. (10 marks)
 - 4.4. List two (02) examples where craniofacial suture growth is modified in orthodontics. (05 marks)
 - 4.5. State two (02) other methods of craniofacial growth giving examples. (10 marks)

PART C (PHYSIOLOGY)

- 5.
- 5.1. Describe the process of oxygen transport in blood. (60 marks)
- 5.2. Explain the mechanisms that could give rise to hypoxaemia in an adult. (40 marks)
- 6.
- 6.1. Explain the compensatory mechanisms that operate in response to extracellular fluid volume depletion. (75 marks)
- 6.2. Explain the physiological basis of fluid retention in liver cirrhosis. (25 marks)

PART D (PATHOLOGY)

- 7.
- 7.1. What is a "giant cell"? (05 marks)
- 7.2. Name and describe a giant cell which is found in a healthy individual. (20 marks)
- 7.3. Name and describe the morphology of three (03) different types of giant cells and pathological conditions in which they are found. (60 marks)
- 7.4. State three (03) diseases that affect jaw bones and oral soft tissues where presence of giant cells is a predominant feature. (15 marks)
- 8.
- 8.1. Define the following terms:
- 8.1.1. Oedema (10 marks)
- 8.1.2. Hyperaemia (10 marks)
- 8.1.3. Congestion (10 marks)
- 8.2. List four (04) causes of oedema. (20 marks)
- 8.3. Outline the mechanism of generalized oedema. (25 marks)
- 8.4. List the differences between exudate and transudate. (25 marks)