

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (ORAL & MAXILLOFACIAL
SURGERY) – OCTOBER 2020

Date: ^{10th Dec} ~~6th October 2020~~ ^{7/11/20}

Time:- 9.00 a.m. – 12.00 noon

PAPER I

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

PART A (GENERAL ANATOMY)

1. In respect of the tongue, describe
 - 1.1. the musculature. (40 marks)
 - 1.2. the lymphatic drainage and its clinical relevance. (30 marks)
 - 1.3. the innervation in relation to development. (30 marks)

2.
 - 2.1. Describe the course and immediate anatomical relations of the cervical and thoracic parts of the right vagus nerve. (30 marks)
 - 2.2. Outline the distribution of cervical branches of the vagus nerve. (30 marks)
 - 2.3. Explain the clinical features of a vagus nerve lesion at the base of the skull. (40 marks)

3.
 - 3.1. What is “patent ductus arteriosus”? (20 marks)
 - 3.2. Describe the advantage of having a patent ductus arteriosus in a patient with
 - 3.2.1. Fallot’s tetralogy (30 marks)
 - 3.2.2. transposition of great vessels (30 marks)
 - 3.3. Explain why many congenital anomalies in the head and neck region are often associated with cardiac anomalies. (20 marks)

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- 4.
- 4.1. Describe the course of the maxillary artery. (60 marks)
 - 4.2. Discuss the clinical importance of the first part of the maxillary artery. (40 marks)

PART B (DENTAL ANATOMY)

- 5.
- 5.1. List the functional stages in the life cycle of the inner dental epithelium. (25 marks)
 - 5.2. State the function/s of each stage mentioned in 5.1. (25 marks)
 - 5.3. List the cell remnants of human odontogenesis. (20 marks)
 - 5.4. Outline the role of the cell remnants mentioned in 5.3 in the development of pathological lesions. (30 marks)
6. In respect of the alveolar process, describe the
- 6.1. functions (20 marks)
 - 6.2. structure (30 marks)
 - 6.3. clinical relevance (20 marks)
 - 6.4. functional adaptations (30 marks)
- 7.
- 7.1. List the different types of specialized cellular junctions found in the oral mucosa. (30 marks)
 - 7.2. List the main components of the cellular junctions mentioned in 7.1 (10 marks)
 - 7.3. State the components and functions of basal lamina. (30 marks)
 - 7.4. Outline the synthesis of elastic fibres. (30 marks)
- 8.
- 8.1. State the radiographic features of mandibular dentition of a 7-year-old healthy child. (40 marks)
 - 8.2. Outline the structure and function/s of the Gubernacular cord. (30 marks)
 - 8.3. Explain the origin and functions of odontoclasts. (30 marks)

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SELECTION EXAMINATION IN MD (ORAL & MAXILLOFACIAL
SURGERY) – DECEMBER 2020

Date:- 11th December 2020

Time:- 9.00 a.m. – 12.00 noon

PAPER II

Answer three (03) question from each part.

Answer each question in a separate book.

PART A (PHYSIOLOGY)

1. Explain the physiological basis of the following:
 - 1.1. Better ventilation and perfusion in the base of the lung compared to the apex in upright posture. (25 marks)
 - 1.2. Reduced coronary blood flow to the left ventricle in tachycardia (25 marks)
 - 1.3. Use of proton pump inhibitors in the treatment of peptic ulcers. (25 marks)
 - 1.4. Occurrence of bradycardia and elevated blood pressure in a patient with an acute intracranial haemorrhage. (25 marks)
2. A 35-year-old man was admitted to a Maxillofacial ward after a road traffic accident with profuse facial bleeding. The patient was given 1 liter of isotonic saline during the initial resuscitation.
 - 2.1. Outline the body fluid distribution in a 70 kg healthy adult male. (20 marks)
 - 2.2. Describe how the 1 liter of isotonic saline gets distributed in different fluid compartments of the body of the above patient. (30 marks)
 - 2.3. Explain why 5% dextrose is not appropriate as a resuscitation fluid for this patient. (30 marks)
 - 2.4. State the factors determining the distribution of extracellular fluid volume in a healthy adult. (20 marks)

Contd...../2-

3.
 - 3.1. Describe the process of oxygen transport in blood. (40 marks)
 - 3.2. Draw the oxygen-haemoglobin dissociation curve for adult haemoglobin and state the effects of moderate muscular exercise on it. (30 marks)
 - 3.3. Explain the 'double Bohr effect' that operates at the placenta. (30 marks)
4. Explain the physiological basis of the following:
 - 4.1. Lignocaine is used as a local anaesthetic to relieve pain. (25 marks)
 - 4.2. Glomerular filtration rate is maintained relatively constant despite a change in mean arterial pressure from 95 mmHg to 110 mmHg. (25 marks)
 - 4.3. Diabetic ketoacidosis can produce hyperkalaemia. (25 marks)
 - 4.4. Artificial hyperventilation is used to reduce cerebral oedema in a patient with head injury (25 marks)

PART B (PATHOLOGY)

5.
 - 5.1. List three (03) types of aetiological agents causing septic shock. (15 marks)
 - 5.2. Describe the pathogenesis of septic shock. (50 marks)
 - 5.3. Describe the complications of septic shock. (35 marks)
6. A 55-year-old woman presented with an irregular lesion on the inner aspect of the right lower lip, clinically suspicious of a squamous cell carcinoma. Enlarged right cervical lymph nodes were also present on examination.
 - 6.1. List the histology/cytology specimens that are required for the diagnosis and management of this patient. (20 marks)
 - 6.2. Describe how you would collect and transport each specimen mentioned in 6.1 to the histopathology laboratory. (40 marks)
 - 6.3. If the diagnosis was confirmed as a squamous cell carcinoma, outline the important prognostic information that you would expect in the final histopathology report of this patient. (25 marks)
 - 6.4. Name five (05) predisposing factors of squamous cell carcinoma. (15marks)

7. A 35-year-old man sustained fractures in the mid shaft region of the femur and the pelvis following a road traffic accident. After initial resuscitation, the patient underwent surgery for internal fixation of fracture of the femur.
- 7.1. Describe the steps involved in healing of bone fractures without surgical intervention. (40 marks)
 - 7.2. List the factors affecting healing of fractures. (20 marks)
 - 7.3. State how the healing of the fractured femur in this patient differs from fracture healing mentioned in 7.1. (10 marks)
 - 7.4. "The patient in the above scenario could have had a fatal outcome". Support this statement with reasons. (30 marks)
- 8.
- 8.1. What is meant by "suppurative inflammation"? (20marks)
 - 8.2. Name five (05) microorganisms involved in suppurative inflammation. (20 marks)
 - 8.3. Define the term "antibiotics". (10 marks)
 - 8.4. Discuss the different mechanisms of action of antibacterial agents citing examples. (50 marks)