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POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (ORAL & MAXILLOFACIAL SURGERY) - OCTOBER 2018

Date :- 3rd October 2018 **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.

1.1. State the attachments of the lateral pterygoid muscle. (20 marks)

1.2. Explain how the attachments of lateral pterygoid muscles influence the movements of the mandible. (30 marks)

1.3. Describe the immediate anatomical relations of the lateral pterygoid muscle and their clinical significance. (50 marks)

2.

2.1. List the contents of the digastric triangle of the neck. (30 marks)

2.2.

2.2.1. Outline the pathways of secretomotor innervation of major salivary glands. (30 marks)

2.2.2. Explain why an injury to the region of the spine of sphenoid bone may cause a reduction in secretion from ipsilateral submandibular and sublingual glands. (20 marks)

2.3. Outline the lymphatic drainage of the floor of the mouth. (20 marks)

Contd...../2-

3.

3.1. Describe the anatomy of an intercostal space. (70 marks)

3.2. State the relevance of anatomy of intercostal space in clinical practice. (30 marks)

4.

4.1. Describe the

4.1.1. arterial supply (60 marks)

4.1.2. venous drainage (20 marks)

of the brain

4.2. State the clinical relevance of arterial supply to the brain. (20 marks)

PART B (DENTAL ANATOMY)

5.

5.1. List the orofacial structures which are derived from the neural crest. (20 marks)

5.2. State two (02) conditions which are manifested in the orofacial region due to failure of neural crest cell migration. (10 marks)

5.3. Describe the alveolar bone proper under the following :

5.3.1. Development (20 marks)

5.3.2. Structure (30 marks)

5.3.3. Functional adaptations (20 marks)

Contd...../3-

6.

6.1. Explain how you would distinguish the boundary between hard palate and soft palate by

6.1.1. clinical examination (20 marks)

6.1.2. histological features (20 marks)

6.2. Outline the lymph drainage of the palate. (20 marks)

6.3. Describe the postnatal growth of the hard palate (40 marks)

7.

7.1. Describe the functions of oral mucosa. (40 marks)

7.2. List the non-keratinocytes seen in oral epithelium. (20 marks)

7.3. How do the non-keratinocytes differ from keratinocytes? (15 marks)

7.4. Describe the histological appearance of non-keratinocytes mentioned in 7.2. and explain the reasons for such appearance. (25 marks)

8.

8.1. Explain the possible mechanisms of tooth eruption. (40 marks)

8.2. List ten (10) possible molecular determinants which play a role in tooth erupting signaling cascade. (20 marks)

8.3. Describe the post eruptive tooth movements and their clinical relevance. (40 marks)

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SELECTION EXAMINATION IN MD (ORAL & MAXILLOFACIAL SURGERY) – SEPTEMBER/OCTOBER 2018

Date :- 4th October 2018 **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. Define the term haemostasis. (10 marks)

1.2. Outline the rationale for selecting haematological investigations in diagnosing a bleeding disorder. (40 marks)

1.3. State how liver diseases result in haemostatic impairment. (20 marks)

1.4. State the effect of following pharmaceutical agents on haemostatic mechanism.

1.4.1. Aspirin (10 marks)

1.4.2. Clopidogrel (10 marks)

1.4.3. Tranexamic acid (10 marks)

2.

2.1. State three (03) events that cause natural but important endocrine changes in the human body. (15 marks)

2.2. Outline the stress response that occur following severe injury or surgery. (25 marks)

2.3. List the actions of steroids in lowering immunity and inflammation. (20 marks)

2.4. State the rationale of measuring PPBS about 2-hours after a major meal. (20 marks)

2.5. State how untreated hyperthyroidism may complicate surgery. (20 marks)

Contd...../2-

3. Followings are the results of haematological investigations of a 40 year old female patient awaiting maxillofacial surgery.

Hb	9.0 g/dl	(11.5-15)
RBC	4.0 $x10^{12}$/l	(4.2-5.2 $x10^{12}$)
MCV	105 fl	(80 -100)
Haematocrit	32.2%	(37 - 48%)
MCH	28.6 pg	(27 – 31)
RDW	18.6%	(11.5 14.5)

3.1. State the condition that the patient is affected with. (10 marks)

3.2. State the causes for the condition stated in 3.1. (15 marks)

3.3. State the investigations necessary to confirm the diagnosis stated in 3.1. (20 marks)

3.4. List the signs and symptoms that could be present in the patient described above. (25 marks)

3.5. State the reasons for low haemoglobin levels observed in patients with chronic kidney disease (CKD). (30 marks)

4. State the physiological basis of followings:

4.1. Calcium channel blockers reduce the pumping activity of the heart. (20 marks)

4.2. Non-progressive shock does not require aggressive therapy. (20 marks)

4.3. Observation of polycythemia in a patient with severe acute vomiting. (20 marks)

4.4. QRS complex of lead aVR of a healthy adult has a downward deflection. (20 marks)

4.5. Observation of petechiae in a patient with aplastic anaemia. (20 marks)

Contd..../3-

PART B (PATHOLOGY)

5. Explain pathogenesis and possible consequences of following processes in a right submandibular lymph node.

5.1. Suppuration (40 marks)

5.2. Caseous necrosis (40 marks)

5.3. Infectious mononucleosis infection (20 marks)

6. Given below is a pathology report of a 60 year old man who underwent wide local excision of a mucosal lesion of the right cheek with right cervical neck dissection.
"The sections of the right cheek lesion reveal a well differentiated squamous cell carcinoma. The maximum depth of invasion is 17mm.
The adjacent sub mucosa shows hyalinised fibrosis. One of the resection margins reveals high grade dysplasia.
Three out of fifteen lymph nodes from the right cervical block dissection show extensive tumour metastasis".

6.1. State the grade of this tumour. (05 marks)

6.2. State the following in relation to the patient described above

6.2.1. Two (02) favourable prognostic features. (20 marks)

6.2.2. Two (02) unfavourable prognostic features. (20 marks)

6.3. State the premalignant condition indicated in the report. (10 marks)

6.4. State the implications of dysplasia presence at the margin of the excision. (20 marks)

6.5. Outline the process of metastasis of the tumour to cervical lymph nodes. (25 marks)

Contd...../4-

7.

7.1. Define the term hyperaemia (10 marks)

7.2. Compare and contrast active and passive hyperaemia. (30 marks)

7.3. Describe the chronic effects of passive hyperaemia on the following organs:

7.3.1. Liver (25 marks)

7.3.2. lung (25 marks)

7.3.3. Leg (10 marks)

8. With regards to cellular adaptations

8.1. Define following terms:

8.1.1. Atrophy (10 marks)

8.1.2. Hyperplasia (10 marks)

8.1.3. Hypertrophy (10 marks)

8.1.4. Metaplasia (10 marks)

8.2. Give five (05) conditions where atrophy is observed. (15 marks)

8.3. Which processes mentioned in 8.1. have potential to occur simultaneously? Explain your answer giving an example. (15 marks)

8.4. Which processes mentioned in 8.1. are related to development of dysplasia? Explain your answer giving an example. (15 marks)

8.5. Name three (03) orofacial conditions in which hyperplasia is observed. (15 marks)