

UNIVERSITY OF JAFFNA, SRILANKA
FIRST EXAMINATION FOR MEDICAL DEGREES – JUNE 2013
ANATOMY - PAPER II

Date : 10.06.2013

Time : 3 hours

Answer all TEN questions

Answer EACH PART in separate answer book

Part A

1. A 65 year old woman complained of dysphagia (difficulty in swallowing) for one month. Endoscopy was performed and a biopsy was taken from the lesion in the lower third of oesophagus confirmed the diagnosis of oesophageal cancer.
- 1.1 Mention the extent of oesophagus in relation to vertebrae (10 Marks)
- 1.2 Mention the constrictions in the oesophagus and their levels from oral cavity (35 Marks)
- 1.3 Name two congenital vascular anomalies which may cause dysphagia (20 Marks)
- 1.4 List the arteries that supply the oesophagus (15 Marks)
- 1.5 Briefly describe the microscopic anatomy of lower part of oesophagus (20 Marks)
2. A 18 year old boy who was riding a bicycle met with an accident. After the fall, he couldn't pass the urine. After 10 hours he observed a swelling of scrotum, penis and lower part of the anterior abdominal wall.
- 2.1 Name the location of rupture in the above condition (10 Marks)
- 2.2 Explain the reason for the above clinical presentation (35 Marks)
- 2.3 Name the gland that opens into the superficial perineal pouch (10 Marks)
- 2.4 Briefly describe the development of penis and list three anomalies (45 Marks)

Part B

3. A 20 year old girl presented with painful abscess over the nose. The doctor explained the patient that it is important to treat this condition with antibiotics otherwise it may lead to cavernous sinus thrombosis
- 3.1 Illustrate the dangerous area of the face with a diagram (15 Marks)
- 3.2 What are the connections/communications of the cavernous sinus (30 Marks)
- 3.3 What are the relations of the cavernous sinus (25 Marks)
- 3.4 What is the nerve that lies within the cavernous sinus (10 Marks)
- 3.5 Describe the clinical picture, if the nerve mentioned in 3.4 is affected due to cavernous sinus thrombosis (20 Marks)

4. A 75 year old woman, while getting down from a bus had a fall on outstretched hand. She noticed swelling and pain on the wrist. X ray findings confirmed the diagnosis of fracture of the lower end of the radius
- 4.1 List the common sites of fracture /dislocation in a fall on outstretched hand (20 Marks)
- 4.2 What deformity will be noticed in this woman (20 Marks)
- 4.3 Describe the relations of ulnar and radial styloid process in a normal wrist and after this fracture (20 Marks)
- 4.4 Surface mark the radial styloid process in a normal person (05 Marks)
- 4.5 Name the carpal bones that articulate with the distal end of the radius (15 Marks)
- 4.6 Classify the joint mentioned in 4.5 (20 Marks)
5. A male patient with fracture of neck of the left fibula had plaster cast (POP) applied from middle of the thigh to distal foot (above knee POP). After removing POP he was unable to dorsiflex and evert the left foot. Also he had loss of sensation on lateral aspect of leg and dorsum of foot
- 5.1 Indicate the clinical condition in this patient (10 Marks)
- 5.2 What is the abnormal gait found in this patient (20 Marks)
- 5.3 Explain on anatomical basis of
- 5.3.1 Loss of sensation on lateral aspect of leg and dorsum of foot (20 Marks)
- 5.3.2 Inability to dorsiflex the foot (25 Marks)
- 5.3.3 Inability to evert the foot (25 Marks)

Part C

6. Write notes on stomach based on the following
- 6.1 Blood supply (40 Marks)
- 6.2 Embryological development (30 Marks)
- 6.3 Light microscopic appearance of fundic stomach (30 Marks)
7. A midline surgical incision was made in a 46 year old man for an exploratory laparotomy. Based on your knowledge in the anatomy of abdominal wall,
- 7.1 List the muscles in the anterior abdominal wall (20 Marks)
- 7.2 List the structures incised (cut) in the above incision to reach the abdominal cavity (in order) (20 Marks)
- 7.3 Mention the advantages of this midline incision (15 Marks)
- 7.4 Write the nerve supply to each muscle in the anterior abdominal wall (precisely) (30 Marks)
- 7.5 List the arteries that supply to the muscles in the anterolateral abdominal wall (15 Marks)

Part D

8. A 30 year old man presented with chronic infection of right submandibular gland and he underwent submandibular adenectomy (submandibular gland excision).
- 8.1 Name the nerve that is liable to damage during the incision of skin and soft tissue (10 Marks)
- 8.2 How should the incision be made to prevent the nerve damage during the surgery (15 Marks)
- 8.3 Describe the anatomical factors that contribute to high incidence of infection in submandibular gland compared to other salivary glands (25 Marks)
- 8.4 Briefly describe the anatomical relationship of submandibular gland (50 Marks)

Part E

9. A 48 year old lady presented with a lump in the upper outer quadrant of her left breast. Her left breast appeared as peau d' orange. Histologically it was confirmed as a cancer.
- 9.1 Mention the anatomical extent of the female breast (15 Marks)
- 9.2 What is suspensory ligament of Cooper? (10 Marks)
- 9.3 Briefly describe the lymphatic drainage of the breast (40 Marks)
- 9.4 What is the reason for peau d' orange in the above clinical condition? (15 Marks)
- 9.5 Describe the structure of lactating breast under light microscope (20 Marks)
10. A 42-year-old lady went to an ophthalmologist because of several months of worsening vision that had begun to interfere with her driving. Her past history is notable for long-standing menstrual irregularity, galactorrhea and infertility. She underwent visual field assessment and her report is given below. Dark area indicates loss of vision.



- 10.1 Mention the cells of the retina which are responsible for visual sensation. (10 Marks)
- 10.2 Describe the visual pathway from retina to the visual cortex. (30 Marks)

- 10.3 Identify the site of the lesion in the visual pathway of above mentioned lady (10 Marks)
- 10.4 What could be the cause for the lesion, which led to the above problems in this lady? (10 Marks)
- 10.5 How does the pupil of left eye constrict when we shine a light into the right eye? (15 Marks)
- 10.6 Describe the accommodation and convergence reflexes (15 Marks)
- 10.7 What is Argyll Robertson pupil? (10 Marks)