

UNIVERSITY OF JAFFNA, SRI LANKA
FIRST EXAMINATION FOR MEDICAL DEGREES (1st) – MARCH 2018
ANATOMY – PAPER II

Date: 12.03.2018

Time: Three hours

Answer all TEN questions

Answer EACH PART in a separate answer book

Part A

1. A 50 year man presented with progressive dysphagia and weight loss during last two months. On examination a firm lump was palpated deep to the anterior border of sternocleidomastoid muscle. Biopsy taken during the endoscopy confirmed the cervical oesophageal cancer.
- 1.1. Illustrate the term "dysphagia" (10 Marks)
 - 1.2. How do you explain the palpation of the above mentioned lump? (20 Marks)
 - 1.3. During endoscopy, which part(s) of oesophagus show(s) constrictions in a healthy person? (20 Marks)
 - 1.4. Outline the course of oesophagus (30 Marks)
 - 1.5. Outline the light microscopic appearance of lower part of cervical oesophagus in a healthy person (20 Marks)
- 2.
- 2.1. Briefly describe the gross anatomy of inferior vena cava and list its tributaries (in order) (35 Marks)
 - 2.2. Briefly describe the anatomical relations of the right kidney (35 Marks)
 - 2.3. Write notes on lesser omentum (30 Marks)
- 3.
- 3.1. Outline the ligaments present in the cervical part of vertebral column (30 Marks)
 - 3.2. Write notes on anatomy of eye lid (40 Marks)
 - 3.3. Write notes on X- linked recessive inheritance pattern (30 Marks)

PART B

4. Briefly describe the structural features of small intestine to perform its functions effectively (40 Marks)
- 4.2. Write notes on light microscopic appearance of colon (30 Marks)
- 4.3. Briefly describe the development of pancreas and list two anomalies (30 Marks)
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5. A 45 year woman presented with a lump in the vagina. Per vaginal examination revealed the descent of cervix into the vagina (uterovaginal prolapse).
- 5.1. Write the normal position of uterus (10 Marks)
- 5.2. List five structures stabilizing the uterus in its position (20 Marks)
- 5.3. Write the arterial supply of uterus (15 Marks)
- 5.4. Briefly describe the development of uterus and list three anomalies (35 Marks)
- 5.5. Write notes on light microscopic appearance of endometrium in this patient (20 Marks)

PART C

6. A 66 year man presented with difficulty in voiding of urine for the past six months. The rectal examination revealed enlarged prostate.
- 6.1. List out the different zones of prostate gland (20 Marks)
- 6.2. Which zone is more prone for benign prostatic enlargement (10 Marks)
- 6.3. Explain the prostatic urethra and structures open into it (35 Marks)
- 6.4. Write notes on blood supply of prostate gland (35 Marks)
7. A 26 year male acquired a sports injury and found to have the twisted right leg. On examination his right knee joint was swollen and tender. Investigation revealed tear in the anterior cruciate ligament and medial menisci.
- 7.1. Enumerate the factors involved in the stability of knee joint (20 Marks)
- 7.2. Which menisci is more prone to injury and give the reason for it (20 Marks)
- 7.3. Draw a cross sectional diagram to show the attachments of cruciate ligaments and menisci (20 Marks)
- 7.4. Write the nerve supply of the knee joint (20 Marks)
- 7.5. Mention the functions of popliteus muscle (20 Marks)

PART D

8. A man met with an automobile accident was brought to the casualty ward. On examination his left shoulder was found to be flat. An Anteroposterior (A-P) X-ray of the shoulder confirmed the diagnosis of anterior dislocation of shoulder joint.

8.1. Mention the weakest position of the shoulder joint for this type of dislocation (15 Marks)

8.2. Draw and label a schematic sagittal section through the shoulder joint to show its relations (30 Marks)

8.3. List the factors that favor the anterior dislocation of shoulder joint (15 Marks)

8.4. Explain the following on anatomical basis

8.4.1. Flattening of the shoulder (15 Marks)

8.4.2. Subcoracoid position of the head of the humerus (15 Marks)

8.5. Mention the site that you will check for sensation to assess the integrity of axillary nerve (10 Marks)

9. A 55 year woman presented with the history of progressive change in sensation and weakness on both hands and forearms. Physical examination revealed impairment of pain and temperature sensation in the upper limbs, but touch and position sensations were intact. Muscle tone and reflexes were diminished in the upper limb and exaggerated in the lower limb. Diagnosis of syringomyelia was made after MRI scan.

9.1. Draw a cross section of spinal cord at the level of lesion and label fully (25 Marks)

9.2. Brief out the pain pathway from tip of index finger to cerebral cortex (20 Marks)

9.3. Explain the following on anatomical basis

9.3.1. Dissociative sensory loss in upper limb (loss of pain and temperature sensation with intact touch and position sensation) (25 Marks)

9.3.2. Weakness of muscles of forearm and hand with diminished muscle tone and reflexes (20 Marks)

9.3.3. Increased muscle tone, reduced power and exaggerated tendon reflexes in lower limb (10 Marks)

10.

10.1. Draw and label a cross sectional view of thorax at the level of lower border of fourth thoracic vertebra (25 Marks)

10.2. Describe the anatomy of the left atrium (25 Marks)

10.3. Describe the safe triangle for insertion of intercostal drainage tube (25 Marks)

10.4. Discuss the anatomical basis of myocardial ischaemic pain felt in the medial aspect of the left arm (25 Marks)
