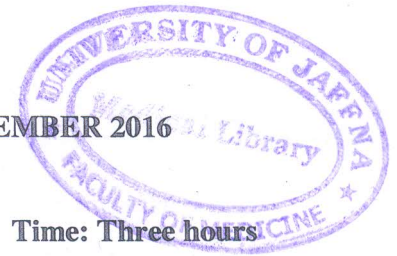


UNIVERSITY OF JAFFNA, SRI LANKA  
FIRST EXAMINATION FOR MEDICAL DEGREES (2<sup>nd</sup>) – NOVEMBER 2016  
ANATOMY – PAPER II



Date: 01.11.2016

Time: Three hours

Answer all TEN questions

Answer EACH PART in a separate answer book

**Part A**

1. A 20 year old boy was admitted to the hospital following a blunt trauma to the left lower chest wall. He was found to have severe contusions of his left lower chest. Severe haemorrhage from an abdominal organ was controlled by a surgical procedure.
  - 1.1 What solid abdominal organ was most likely to be injured? (10 Marks)
  - 1.2. Write reason(s) for your answer mentioned in 1.1. (10 Marks)
  - 1.3. Name the surgical procedure that was performed to control the severe haemorrhage (10 Marks)
  - 1.4. Write the blood supply of the organ mentioned in 1.1. (35 Marks)
  - 1.5. Write the anatomical relations of the organ mentioned in 1.1. (35 Marks)
  
2. Write notes on
  - A 2.1. Gross anatomical features of right atrium (35 Marks)
  - 2.2. Typical thoracic vertebra (35 Marks)
  - B Phenotypic features of Down syndrome (30 Marks)
  
3. A 60 year old female presented with an obstruction in the sigmoid colon. Biopsy sample taken by the colonoscopy confirmed the presence of a malignant tumour. Sigmoid colectomy was performed.
  - 3.1. Illustrate the term "sigmoid colectomy" (10 Marks)
  - 3.2. Describe the gross anatomical features used to identify the sigmoid colon (30 Marks)
  - 3.3. Describe the blood supply of colon in a healthy person (30 Marks)
  - 3.4. Describe the light microscopic appearance of colon in a healthy person (30 Marks)

4.

- 4.1. Draw a cross section of the neck across the thyroid gland and label fully (40 Marks)
- 4.2. Describe the lacrimal apparatus (40 Marks)
- 4.3. Write notes on pterygoid plexus (20 Marks)

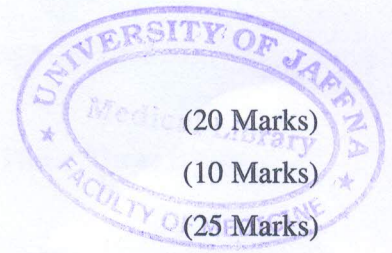
### Part B

- 5. While playing the hockey, a 45 year old man was accidentally hit by skate on the lateral surface of his right leg just below the knee. He had pain in that region and loss of power in his right leg and foot. X-ray revealed fracture at the neck of the fibula.
  - 5.1. Which nerve was likely to be injured in this patient? (15 Marks)
  - 5.2. Write the anatomical course and branches of the nerve mentioned in 5.1 (50 Marks)
  - 5.3. Write the dermatome pattern of each cutaneous branch mentioned in 5.2 (20 Marks)
  - 5.4. Name the deformity caused by the injury of the nerve mentioned in 5.1 (15 Marks)
- 6. 30 year-old female presented with progressive low back pain and severe radiating pain in the right leg for two months duration. Clinically it was suspected as disc prolapse. MRI revealed a large right-sided L5-S1 disc herniation. She was treated for pain with epidural steroid injections and oral medications.
  - 6.1. Describe the anatomy of intervertebral disc (20 Marks)
  - 6.2. Which nerve root can be compressed by herniated disc in this patient? (10 Marks)
  - 6.3. Name the anatomical structures that form the boundaries of the intervertebral foramen (20 Marks)
  - 6.4. List the structures which are encountered during epidural steroid injections (20 marks)
  - 6.5. What are the additional structures encountered during lumbar puncture? (10 marks)
  - 6.6. Describe the arterial supply to the spinal cord (20 Marks)
- 7. After the following nerve injuries, discuss the deformities caused on anatomical basis
  - 7.1. Accidental injury to long thoracic nerve during axillary surgery (30 Marks)
  - 7.2. Axillary nerve injury in shoulder joint dislocation (30 Marks)
  - 7.3. Posterior interosseous nerve injury in fracture of the neck of the radius (40 Marks)



8. Regarding ovary

- 8.1. Outline the gross anatomical features (20 Marks)
- 8.2. Mention the ligaments/ peritoneal folds and their attachments (10 Marks)
- 8.3. Describe its anatomical relations (25 Marks)
- 8.4. Describe its blood supply (20 Marks)
- 8.5. Mention the internal structure of an adult ovary with a labeled diagram (25 Marks)



**Part C**

9. A 30 year-old female had a movable lump in the upper outer quadrant of the breast. She underwent Surgery. The lump was histologically confirmed as benign fibroadenoma.

- 9.1. Write the structures on which the breast rests (15 Marks)
- 9.2. Mention the anatomical extent of the female breast (20 Marks)
- 9.3. Draw a labeled diagram of microscopic structure of active breast (25 Marks)
- 9.4. Briefly describe the development of breast and indicate three anomalies (40 Marks)

10

A Briefly describe the microscopic anatomy of

- 10.1. fundus of the stomach (25 Marks)
- 10.2. trachea (20 Marks)

B. Enumerate the development of

- 10.3. diaphragm and its anomalies (25 Marks)
- 10.4. thyroid gland and its anomalies (30 Marks)

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