

**UNIVERSITY OF JAFFNA, SRI LANKA**  
**FIRST EXAMINATION FOR MEDICAL DEGREES – JULY 2015**  
**ANATOMY - PAPER II**



**Date : 27.07.2015**

**Time : 3 hours**

**Answer all TEN questions -(Answer each part in separate answer book)**

**PART A**

1. A 20 year old lady was admitted to the hospital with 2 months history of headache, nausea and vomiting. A neurological examination showed cerebellar signs and it was diagnosed as tumor of the cerebellum
  - 1.1 Enumerate the boundaries of posterior cranial fossa (20 Marks)
  - 1.2 How it communicates with rest of the cranial cavity and vertebral canal (15 Marks)
  - 1.3 Name the structures of central nervous system lies within the posterior cranial fossa (15 Marks)
  - 1.4 Describe the gross anatomy of the cerebellum (35 Marks)
  - 1.5 Name three cerebellar afferent and efferent connections (15 Marks)
  
2. A 76 year old male presented with 2 weeks duration of haematuria and dysuria. Cystoscopy revealed tumor occupying the right lateral wall of the bladder.
  - 2.1 Write the macroscopic appearance of interior of the bladder (20 Marks)
  - 2.2 Mention the anatomical structures that can be affected by local invasion of tumor (30 Marks)
  - 2.3 Describe the course of intravesical part of the ureter (15 Marks)
  - 2.4 Write the nerve supply of bladder (20 Marks)
  - 2.5 Mention two congenital anomalies based on its embryological basis (15 marks)
  
3. 55 year old lady presented with complaints of pain and paresthesia in her right hand and forearm. Physical examination revealed atrophy of intrinsic muscles of the hand and reduced sensation on medial aspect of the forearm and little finger. Radiological investigation revealed the presence of right cervical rib in this patient
  - 3.1 Write the segmental innervation for the intrinsic muscles of the hand (10 Marks)
  - 3.2 What is the function of the intrinsic muscles of the hand ? (10 Marks)
  - 3.3 Name the intrinsic muscles of the hand and specify the peripheral nerves that innervate these intrinsic muscles (40 Marks)
  - 3.4 How will you check the integrity of these nerves by physical examination (describe one test for each nerve) (20 Marks)
  - 3.5 Describe on anatomical basis how the cervical rib causes above signs and symptoms (20 Marks)

- 4 Mr. Asokan while riding a motorcycle hit by a car and was thrown away from his bike. He had severe pain in his right hip and was unable to move his right leg. Plain X ray revealed posterior hip dislocation
- 4.1 Mention the type of hip joint (10 Marks)
- 4.2 What is the weakest position of the hip joint (15 Marks)
- 4.3 Describe the stabilizing factors of the hip joint (30 Marks)
- 4.4 Indicate why hip dislocation is a surgical emergency and it has to be reduced as early as possible (15 Marks)
- 4.5 Name the clinically important structure that can be affected in posterior dislocation (10 Marks)
- 4.6 If that structure mentioned in 4.5 is affected, what are the signs and symptoms will be seen in this patient (20 Marks)

### PART B

- 5.
- A. A 35 year old male underwent superficial parotidectomy for a neoplastic lesion. Facial asymmetry was noted after the surgery
- 5.1 What is the most likely nerve affected in this patient (10 Marks)
- 5.2 Outline the extra-cranial course of this nerve (including its branches) (30 Marks)
- 5.3 Write the blood supply and lymph drainage of the parotid gland (15 Marks)
- 5.4 Write the microscopic appearance of the parotid gland (15 Marks)
- B. Write notes on consanguineous marriages (30 Marks)
- 6.
- A 40 year old female was brought to the emergency room following a stab injury in the chest region. Radiological investigation showed the presence of excessive pericardial fluid (pericardial effusion). Pericardial drainage was performed
- 6.1 How stab injury leads to pericardial effusion (10 Marks)
- 6.2 Write notes on serous pericardium (20 Marks)
- 6.3 Write the surface marking of cardiac valves (20 Marks)
- 6.4 Write notes on left coronary artery (35 Marks)
- 6.5 Write four light microscopic features of cardiac muscle (15 Marks)
7. A new born showed respiratory distress and cyanosis soon after the birth. Chest radiography showed that this newborn is having a Bochdalek type of congenital diaphragmatic hernia on the left side
- 7.1 Write notes on development of diaphragm (30 Marks)
- 7.2 What are the abnormally positioned organs may found in the thorax in the above patient (20 Marks)
- 7.3 Write the blood supply and innervation of diaphragm (40 Marks)
- 7.4 Write the other types of congenital diaphragmatic hernia (10 Marks)



### PART C

8. Regarding right suprarenal gland
- 8.1 Write the development of the gland (20 Marks)
  - 8.2 Write the relations of the gland (30 Marks)
  - 8.3 Write the light microscopic appearance of the gland (30 Marks)
  - 8.4 Briefly describe the blood supply of the gland (20 Marks)
9. A 15 year- old school boy had periumbilical pain. Later pain was shifted to the right iliac fossa. On examination, there was tenderness at the Mc Burney's point. It was diagnosed as acute appendicitis.
- 9.1 Write the surface marking of Mc Burney's point (15 Marks)
  - 9.2 Explain the anatomical basis of the above signs and symptoms (25 Marks)
  - 9.3 Name five different anatomical positions of appendix (20 Marks)
  - 9.4 Describe the blood supply of appendix (20 Marks)
  - 9.5 Enumerate the microscopic anatomy of appendix (20 Marks)
10. An overweight 40 year-old married woman with two children was brought to the casualty with complaint of colicky pain in the right upper quadrant of abdomen, nausea and vomiting. The pain was radiated to the back side coinciding with inferior angle of scapula. There was tenderness at the tip of the right 9<sup>th</sup> costal cartilage.
- 10.1 Name the organ that is affected in the above condition (10 Marks)
  - 10.2 Write the gross anatomy of the organ mentioned in 10.1 (50 Marks)
  - 10.3 Explain the radiation of pain to the inferior angle of right scapula (15 Marks)
  - 10.4 Describe briefly the microscopic anatomy of the organ mentioned in 10.1 (25 Marks)