



UNIVERSITY OF JAFFNA, SRI LANKA
FIRST EXAMINATION FOR MEDICAL DEGREES (1st) –MARCH 2021
ANATOMY – PAPER II

Date : 15.03.2021

Time: Three hours

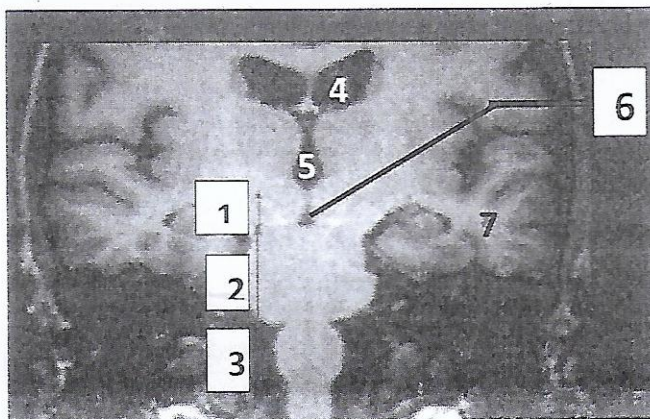
Answer all TEN questions

Answer EACH QUESTION in a separate answer book

1. A 65year female with a history of chronic duodenal ulcer was admitted to the hospital. Investigations revealed perforation in the posterior wall of the first part of duodenum and haemorrhage due to erosion of an artery. A surgical repair was performed.
 - 1.1 What is the artery most likely to be eroded in this patient? (10 Marks)
 - 1.2 Name the branches of the artery mentioned in above 1.1 (10 Marks)
 - 1.3 Outline the anatomical relations of first part of duodenum (35 Marks)
 - 1.4 Mention the blood supply of duodenum (25 Marks)
 - 1.5 Mention two anatomical features that differentiate the proximal and distal parts of the first part of duodenum (20 Marks)
2.
 - A.
 - 2.1 Outline the boundaries of superior mediastinum (20 Marks)
 - 2.2 Write notes on transverse sinus of pericardium (20 Marks)
 - 2.3 Outline the blood supply of oesophagus (30 Marks)
 - B. Write notes on proto-oncogene / oncogene (30 Marks)
3. Regarding the urinary system
 - 3.1 Describe briefly the development of metanephric kidney (25 Marks)
 - 3.2 List three abnormalities during the development of kidney (15 Marks)
 - 3.3 Draw and label the structure of nephron (25 Marks)
 - 3.4 Mention the narrowest sites along the ureter where renal calculi may lodge (15 Marks)
 - 3.5 Write notes on microscopic structure of bladder (20 Marks)
4.
 - 4.1 Name the extraocular muscles and their nerve supply (30 Marks)
 - 4.2 List the structures passes through the superior orbital fissure (25 Marks)
 - 4.3 Write short notes on
 - 4.3.1 ciliary ganglion (20 Marks)
 - 4.3.2 development of retina (25 Marks)
5. A 50 year male patient underwent for lymph node biopsy in the posterior triangle of the neck
 - 5.1 Enumerate the contents of the posterior triangle of the neck (20 Marks)
 - 5.2 Write short notes on the structures related to the scalene anterior muscle (30 Marks)
 - 5.3 Mention the clinical importance of the enlarged left supraclavicular lymph nodes (20 Marks)
 - 5.4 Explain the lymphatic drainage of thyroid gland (30 Marks)

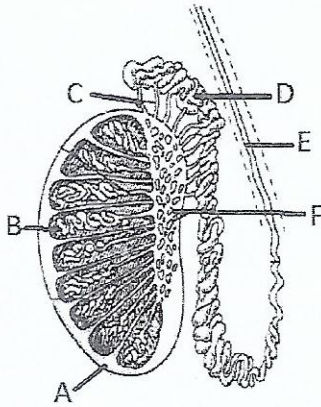
6. Discuss the following on anatomical basis
- 6.1 Impairment associated with median nerve injury can be more disabling of hand than the impairment associated with ulnar nerve injury (40 Marks)
- 6.2 Infections of the little finger can extend to forearm (30 Marks)
- 6.3 Shoulder joint dislocation may lead to loss of sensation over the lower part of deltoid region (30 Marks)

7. A 10 year girl presented with **left side limb weakness, medial strabismus of right eye, diplopia and right side facial weakness**. Investigations revealed a lesion of the pons
- 7.1 Identify the structures 1 – 7 in the normal CT image given below (20 Marks)



- 7.2 Explain the following on anatomical basis
- 7.2.1 left side limb weakness (20 Marks)
- 7.2.2 medial strabismus and on examination difficulty in abduction of right eye (20 Marks)
- 7.2.3 right side facial weakness (20 Marks)
- 7.3 Examination revealed absence of corneal reflex on right side. Explain it on anatomical basis (20 Marks)
8. A 35 year front seat passenger of a car, admitted to hospital following his car collided head on to a tree. He hits his left knee on the dashboard of the car. On clinical assessment, he was unable to move his left leg at the hip and the leg shortened, internally rotated and adducted. He also felt numbness and weakness of his left foot.
- 8.1 What is most probable clinical condition he has developed following the accident? (10 Marks)
- 8.2 List the muscles causing the anatomical deformity he developed after injury (20 Marks)
- 8.3 Why he developed numbness and weakness in the left foot? (10 Marks)
- 8.4 Describe the origin and course of the anatomical structure injured mentioned in 8.3 (30 Marks)
- 8.5 Describe the anatomical stabilizers of the structure clinically affected in this man? (30 Marks)

9. A 35year man presented with primary infertility (inability to cause pregnancy in a fertile female partner) of 2 years. His seminal fluid analysis revealed Azoospermia (Absence of sperms). During further investigations he underwent testicular biopsy. Longitudinal section of a testis is given below



- 9.1 Identify A to F (20 Marks)
- 9.2 What embryological structures forms structure B and E? (10 Marks)
- 9.3 List three arterial supplies of testis (15 Marks)
- 9.4 Write the site of human sperm production and site of fertilization (10 Marks)
- 9.5 Enumerate the pathway of sperm from its origin up to site of fertilization (20 Marks)
- 9.6 Briefly describe the pathway of biopsy needle from scrotal skin up to testis (25 Marks)
10. A patient had malignant tumour in caecum close to the base of the appendix. He underwent hemicolectomy
- 10.1 Mention the structures lying posterior to caecum (30 Marks)
- 10.2 Describe the anatomical feature in caecum that helps to locate the base of the appendix (05 Marks)
- 10.3 Describe the surface marking of base of appendix on the abdomen (10 Marks)
- 10.4 Outline different positions of appendix in relation to caecum (05 Marks)
- 10.5 Outline the blood supply to the ascending colon (20 Marks)
- 10.6 Mention the lymphatic drainage of ascending colon (20 Marks)
- 10.7 List the anatomical components removed in right hemicolectomy (10 Marks)