



**UNIVERSITY OF JAFFNA, SRI LANKA**  
**FIRST EXAMINATION FOR MEDICAL DEGREES -MARCH 2023**  
**ACADEMIC YEAR 2020/2021**  
**ANATOMY PAPER II**

**Date: 20.03.2023**

**Duration: 3 Hours**

**Answer All TEN Questions**

**Answer EACH QUESTION in a separate answer book**

- 1 A 26-year male was brought to the hospital with vomiting and peri-umbilical pain. The pain shifted to the right iliac fossa. The condition was diagnosed as acute appendicitis with relevant investigations. The appendicectomy was performed through a McBurney or transverse muscle-splitting incision.
  - 1.1 Define the term “appendicectomy” (10 Marks)
  - 1.2 How do you explain the sensation of pain in the periumbilical region (25 Marks)
  - 1.3 Outline the surface marking of Mc Burney’s point (15 Marks)
  - 1.4 Outline the surgical importance of Mc Burney’s point (15 Marks)
  - 1.5 Mention the most common anatomical position of the appendix (10 Marks)
  - 1.6 Write notes on appendicular artery (25 Marks)
  
2. 60 year old male presented with difficulty in passing urine and cystoscopy (camera test to see interior of urinary system) examination revealed enlarged occlusive prostate gland (Image 1). Zonal anatomy of prostate is given in Image 2.

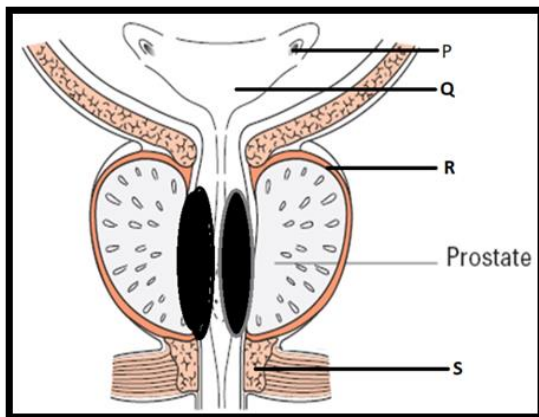


Image 1 (one)

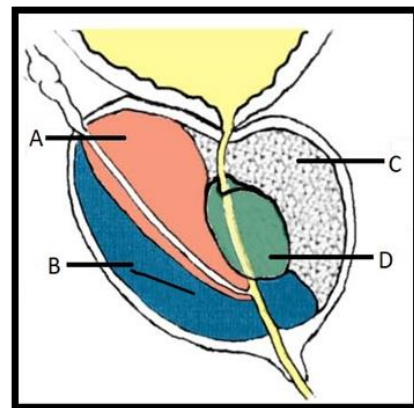
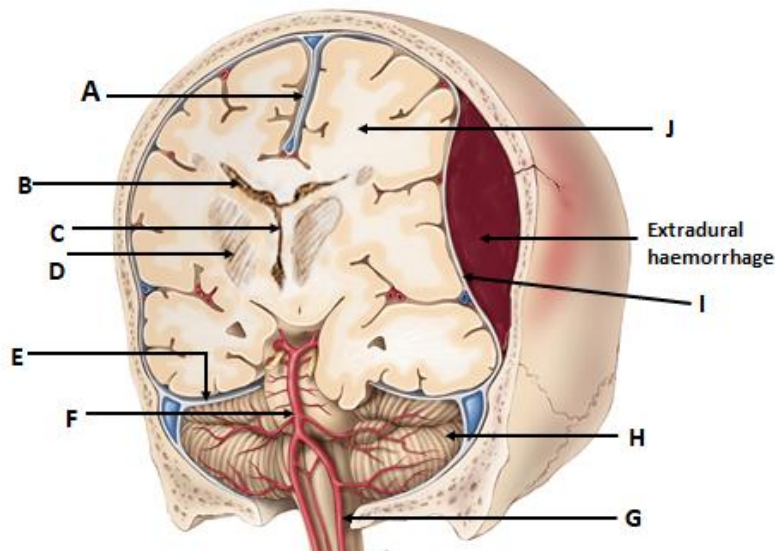


Image 2 (two)

- 2.1 Identify the anatomical planes of **image 1** and **image 2** (10 Marks)
- 2.2 List the 3 types of tissues presents in prostate gland (10 Marks)
- 2.3 List the parts **P,Q,R,S** from image 1(one) (20 Marks)
- 2.4 Name the nerve that control structure **S** (10 marks)
- 2.5 Identify Zones **A,B,C,D** of prostate in Image 2 (two) (20 Marks)
- 2.6 Name the zone in which benign prostatic hyperplasia (BPH) is common (05 Marks)
- 2.7 Name the zone in which prostate cancer is common (05 Marks)
- 2.8 List the relations of prostate gland (20 Marks)

3. Radial artery is harvested for a coronary bypass surgery. An incision is made on the **lateral aspect of the forearm** to expose the artery during this procedure
  - 3.1 Mention two other vessels which could be used in this procedure (10 Marks)
  - 3.2 Name the two vessels that supply the hand region (10 Marks)
  - 3.3 Mention the test done before harvesting the radial artery and explain the anatomical basis why it is performed (20 Marks)
  - 3.4 Name the vessel and nerve encountered in the subcutaneous tissue during this procedure (10 Marks)
  - 3.5 Name the muscle that has to be retracted to expose the radial artery in the forearm (10 Marks)
  - 3.6 Give a landmark in distal forearm / wrist to take radial pulse (10 Marks)
  - 3.7 Name the two branches of the radial artery that define the proximal and distal limits of the radial artery harvest (10 Marks)
  - 3.8 Name the nerve accompany the radial artery in the forearm (10 Marks)
  - 3.9 Briefly describe the test that to be performed to check the integrity of the nerve mentioned in 3.8 (10 Marks)
  
4. A 68 year female presented with diplopia. Clinical examination revealed **complete ptosis, dilated pupil and down and lateral position of right eye ball at rest.**
  - 4.1 Mention the nerve damaged in this condition (10 Marks)
  - 4.2 List the extra ocular muscles and their nerve supply (25 Marks)
  - 4.3 Name the muscle responsible for the constriction of the pupil (10 marks)
  - 4.4 Write the reasons for the above presenting symptoms given in bold (30 Marks)
  - 4.5 List the structures that pass through the superior orbital fissure (25 Marks)
  
5. 5.1 A 60-year-old male was admitted to the emergency unit with difficulty in breathing and severe pain on the chest. Radiological investigations revealed the presence of moderate amount of fluid in the pleural cavity. Pleural drainage was performed by passing a needle just above the upper border of the 5<sup>th</sup> rib. The collected was clear fluid and it was sent for further analysis.
  - 5.1.1 Name the condition (10 Marks)
  - 5.1.2 Explain the anatomical basis, whether the needle can be inserted along the lower border of the rib (20 Marks)
  - 5.1.3 List the muscles that are present in the intercostal space in order (20 Marks)
  - 5.1.4 Mention the various parts of parietal pleura and their nerve supply separately (20 Marks)
  - 5.2 Outline the causes of Down syndrome and the importance of knowing the causes of the Down syndrome (30 Marks)

- 6.
- 6.1 Write the boundaries of the popliteal fossa (30 Marks)
- 6.2 Name the contents of the popliteal fossa (20 Marks)
- 6.3 Write the formation, course and branches of the popliteal artery (30 Marks)
- 6.4 Briefly describe the clinical method of palpation of the popliteal artery (20 Marks)
- 7.
- 7.1 Draw and label the light microscopic structure of adult ovary (30 Marks)
- 7.2 Briefly describe the development of uterus and three abnormalities during the development (40 Marks)
- 7.3 List the coverings of spermatic cord and its contents (30 Marks)
8. A 15 year old boy was hit by a ball to the left temple region of head. He lost his consciousness, but regain in few minutes. He was taken to the emergency unit where he was found to have mild weakness of the right upper and lower limbs and dilated left pupil. He again lost his consciousness. CT scan confirmed Extradural haemorrhage (EDH) . Line diagram of the CT is given below. Answer the questions using the figure



**Line diagram of the CT**

- 8.1 Identify the anatomical plane of the image (10 Marks)
- 8.2 Name the common vessel injury leading to EDH (10 Marks)
- 8.3 Mention the shape of the clot on anatomical basis (10 Marks)
- 8.4 Name the structures labeled as A, B, C, D, E , F, G. H. I. J (20 Marks)
- 8.5 Name the two compartments of cranial cavity formed by structure 'E' (10 Marks)
- 8.6 Explain the neuroanatomical basis
- 8.6.1 Ipsilateral dilated pupil (10 Marks)
- 8.6.2 Contralateral weakness of limbs (10 Marks)
- 8.7 List two abnormal findings in the diagram other than EDH (20 Marks)

9. A 45-year-old man is prepared for left superficial conservative parotidectomy for a noncancerous tumor arising from the left parotid gland.
- 9.1 Mention the parts of the Parotid salivary gland (05 Marks)
- 9.2 List the anatomical structures which are located between these parts of the parotid salivary gland (10 marks)
- 9.3 Describe the course of the duct of the parotid salivary gland (15 marks)
- On the first day after the operation patient developed the clinical features of a nerve damage
- 9.4 Mention the nerve which is vulnerable to damage during surgery in the region (05 marks)
- 9.5 Describe the extracranial course of the nerve (25 marks)
- 9.6 List the distribution of the nerve (25 marks)
- 9.7 Mention the clinical features of the injury to the nerve that can be observed in this patient (15 Marks)
10. A 65-year-old patient presented with sudden onset of severe epigastric pain and had guarding while palpation of abdominal wall on physical examination. He was found to have perforated gastric ulcer on the posterior gastric wall along the lesser curvature at pre-pyloric region. He had collection of gastric contents in the lesser sac. He also had fluid collection in the hepato-renal pouch and the recto vesical pouch
- 10.1 Briefly describe the lesser sac of peritoneal cavity (20 Marks)
- 10.2 Outline the anatomy of
- 10.2.1 Hepatorenal pouch (15 Marks)
- 10.2.2 Recto vesical pouch (15 Marks)
- 10.3 Explain the anatomical basis of collection of fluid in lesser sac spreading to the above mentioned pouches (20 marks)
- 10.4 Outline the nerve supply of parietal peritoneum of abdominal wall (15 Marks)
- 10.5 Describe the anatomical basis for severe epigastric pain with guarding of abdominal wall (15 Marks)

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