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UNIVERSITY OF JAFFNA, SRI LANKA
FIRST EXAMINATION FOR MEDICAL DEGREES (2ND) – August 2019
ANATOMY – PAPER II

Date : 22.08.2019 **Time : Three hours**

Answer all TEN questions
Answer EACH PART in a separate answer book

PART A

1. Human hand is adapted to perform fine skilled movements, in which thumb plays a major role by its great mobility

   1.1 Describe 2 structural adaptations of thumb for its great mobility (20 Marks)
   1.2 List the movements of the thumb in each joint and the principal muscle involved in each movement (40 Marks)
   1.3 Mention the sensory supply of the thumb (10 Marks)
   1.4 Write the blood supply of the thumb (10 Marks)
   1.5 Describe on anatomical basis test performed to assess motor weakness of ulnar and median nerve using thumb (20 Marks)

2. A 75 yearmale presented with a complaint of progressive difficulty in micturition for the past six months. Digital rectal examination revealed a symmetrically enlarged prostate. Clinical diagnosis of benign prostatic enlargement was made

   2.1 Draw and label a diagram to show the features of the posterior wall of prostatic urethra, structures opening into it and urethral sphincters (25 Marks)
   2.2 Describe the relations of prostate gland (20 Marks)
   2.3 List the capsules of prostate in this patient in order and mention the location of prostatic venous plexus and plane of enucleation (25 Marks)
   2.4 Indicate the zones of prostate with the diagram and the zone involved in benign prostatic enlargement (20 Marks)
   2.5 Outline the venous return of prostate gland (10 Marks)

3. A Man complains of lower back pain and lack of sensation on the heel of his right ankle. On examination absence of ankle reflex was noticed. Further investigations confirmed the diagnosis of intervertebral disc prolapse.

   3.1 Describe the ligaments holding the vertebras together (30 Marks)
   3.2 Classify the joints between the bodies of the vertebra (20 Marks)
   3.3 Describe the intervertebral disc (20 Marks)
   3.4 Describe the term disc prolapse (10 Marks)
   3.5 Mention the nerve segment responsible for ankle reflex (10 Marks)
   3.6 Prolapse of which intervertebral disc occurred in this patient (10 Marks)

4. 18 year male patient admitted with circumumbilical pain for 8 hours duration. Then, the pain radiated to right iliac fossa. He underwent appendisectomy

4.1	Give the reason why the pain originated at circumumbilical region	(15 Marks)
4.2	Mention why the pain later shifted to right iliac fossa	(15 Marks)
4.3	Mention the different anatomical positions of the appendix	(20 Marks)
4.4	What do you mean by Macburney's point	(15 Marks)
4.5	Describe the blood supply to appendix and its clinical significance	(25 Marks)
4.6	Mention 2 abnormal positions of the appendix	(10 Marks)

PART B

5 Regarding the urinary system

5.1	Draw a labelled diagram of Nephron	(20Marks)
5.2	Write briefly the development of metanephric kidney	(25Marks)
5.3	List three abnormalities during the development of kidney	(15Marks)
5.4	Enumerate the arterial supply of ureter	(15Marks)
5.5	Indicate the positions of stone formation along the ureter	(10Marks)
5.6	List the layers of the bladder wall	(15Marks)

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6.1	List the structures forming the diaphragm	(25Marks)
6.2	Enumerate three abnormalities during the development of diaphragm	(15Marks)
6.3	Name the major openings found in the diaphragm andwrite the structures passing through each openings	(30Marks)
6.4	Briefly describe the microscopic anatomy of lower part of oesophagus	(30Marks)

PART C

7

A Regarding thoracic region

7,1	Mention the layers present in the intercostal space (in order)	(25 Marks)
7.2	Write notes on pleural cavity	(15 Marks)
7.3	Outline the surface marking of cardiac valves	(35 Marks)

B Outline the causes of Down syndrome (25 Marks)

8 A 30 year male met with an accident with a car while walking. Exploratory laparotomy revealed a ruptured abdominal aorta

8.1	Write the surface marking of the abdominal aorta	(20 Marks)
8.2	List the single ventral branches of the abdominal aorta	(10 Marks)
8.3	Write the structures lie in between the origin of these branches separately	(20 Marks)
8.4	Write the immediate branches arise from each of the branches listed above (in 8.2) separately	(25 Marks)
8.5	Outline the arterial supply to kidney	(25 Marks)

PART D

9. A 35 year male underwent superficial parotidectomy for a neoplastic lesion. Facial asymmetry was noted after the surgery

9.1	What is the most likely nerve affected in this patient	(10 marks)
9.2	Name the other structures traversing the gland	(10 marks)
9.3	Describe the relations of the parotid gland	(20 Marks)
9.4	Outline the extra-cranial course of the nerve you mentioned in 9.1 (including its branches)	(30 marks)
9.5	Explain how will you test terminal branches of the above nerve on anatomical basis	(30 marks)

10 A 70 year male bus conductor complains of pain and prominent vessels in the medial aspect of his left leg. On examination, it was diagnosed as varicose vein.

10.1	Name the vessel involved in this condition	(10 marks)
10.2	Write the formation and course of structure you mentioned in 10.1	(35 marks)
10.3	List out the tributaries of the structure you mentioned in 10.1	(20 Marks)
10.4	Explain the normal structural adaptation of this vessel that prevent the above clinical condition	(35 Marks)