

Question Paper

Exam Date & Time: 10-Jan-2022 10:20 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION
FIRST PROFESSIONAL YEAR MBBS DEGREE EXAMINATION - JANUARY 2023
SUBJECT: ANATOMY - PAPER I
(CBME BATCH – REGULAR/REPEATERS)

Marks: 80

Duration: 160 mins.

Answer all the questions.

- 1) A 65-year-old female had a fall in the verandah. She was unable to get up. She was rushed to the emergency where examination revealed that the affected limb was shortened and laterally rotated. On radiological examination, it was found that the Shenton's line was disrupted. Based on your anatomical knowledge analyze and answer the following:
 - 1A) Specify the part of bone fractured (1)
 - 1B) Explain the ligaments related to the joint formed by upper end of involved bone (6)
 - 1C) Describe the Shenton's line (2)
 - 1D) Mention any other feature that can be depicted in the radiology (1)

- 2) A 42-year-old male met with a road traffic accident. He received a severe blunt trauma to his sternum from the steering wheel of the vehicle. Clinical examination revealed that he had a severe injury to the chamber of the heart located behind the sternum, which also receives venous blood from the limbs. Based on your anatomical knowledge analyze and answer the following.
 - 2A) Mention the chamber involved. (1)
 - 2B) Describe its external and internal features with the help of neat labeled diagrams (7)
 - 2C) Describe the structure of valve which separates this chamber from the chamber below (2)

- 3) **Write short notes on:**
 - 3A) Describe the components of the typical synovial joint with a help of neat, labelled diagram (4)
 - 3B) A pregnant lady complained of pain, numbness, tingling sensation in the lateral part of the hand and fingers. On examination there was a weaker grip with tendency to drop things. The surgeon revealed that the fibrous band in front of the forearm at the wrist is tensed. Name the fibrous band. Describe the attachment and name the structures passing beneath it (4)
 - 3C) Describe the formation and fate of paraxial mesoderm. (4)
 - 3D) Draw and describe the relations of the muscle which depresses the side of the tongue. (4)
 - 3E) Illustrate and describe the microscopic features of the muscle attached to the bones. (4)
 - 3F) A 10-year-old boy accidentally swallowed foreign particle while sleeping in the supine position. It lodged in the most dependant structural and functional unit of the principal organ of respiration. Name the most affected segment. Describe the structures present in it with the help of a neat, labeled diagram. (4)

- 3G) Describe the chorionic villi. (4)
- 3H) A 26-year-old had taken a covid vaccination, which led to loss of rounded contour of the shoulder region. He also complained of impaired abduction of the shoulder with loss of cutaneous sensation over the area of vaccination. Describe the course and branches of the affected structure. (4)
- 3I) Illustrate and describe the epithelium confined to the urinary system. (4)
- 3J) A 65-year-old alcoholic with known history of cirrhosis of liver, complained of vomiting of blood. On examination, his veins around the umbilicus were dilated and he also had blood in stools. Name the main structure involved and justify reasons for vomiting of blood, dilated veins and blood in the stool. (4)
- 3K) Describe the boundaries of the canal formed as a result of descent of testis into scrotum. (4)
- 3L) Illustrate and describe the microscopic structure of the Trachea. (4)
- 3M) Describe the boundaries and contents of the triangular hollow present in front of the elbow. (4)
- 3N) An 8-year-old boy inserted pencil through his nose which resulted in sudden gush of blood. He was taken to the emergency department. On examination, the surgeon said that he had a minor trauma in the lower part of the nose where all the blood vessels anastomose. Specify the part affected. Name all the arteries taking part in the anastomosis with the help of a neat, labeled diagram. (4)
- 3O) Write the fate of Fourth aortic arch (4)

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Question Paper

Exam Date & Time: 12-Jan-2022 10:20 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION
FIRST PROFESSIONAL YEAR MBBS DEGREE EXAMINATION – JANUARY 2023
SUBJECT: ANATOMY - PAPER II
(CBME BATCH –REGULAR/ REPEATERS)

Marks: 80

Duration: 160 mins.

Answer ALL questions.

Essay questions:

- 1) A 58yr old man was referred to the physician with left sided hemiplegia, left sided loss of fine touch, vibration and conscious proprioception. Cranial nerve examination revealed a deviation of the tongue to the right when he was asked to protrude the tongue.
 - 1A) Analyze the case and identify the level of lesion in the brainstem (2)
 - 1B) Name the syndrome and the blood vessel involved. (2)
 - 1C) Draw a neat labelled diagram of the transverse section of brainstem at this level and explain briefly about the grey and white matter seen at this level. (6)

- 2) A 60 year old woman presented to the physician with a painless hard lump in the chest wall and low back ache. On examination there was peau d'orange appearance of the skin, loss of mobility of a modified apocrine sweat gland present in the superficial fascia of pectoral region. She also underwent further investigations such as ultrasound abdomen pelvis and an MRI to look for spread of cancer to other areas.
 - 2A) Analyze the case and identify the structure affected. (1)
 - 2B) Give the anatomical reasons for peau d'orange appearance of the skin, loss of mobility of the structure affected. (2)
 - 2C) Mention the routes through which carcinoma of the affected structure can spread to other areas (2)
 - 2D) Describe in detail the lymphatic drainage of the structure affected. (5)

- 3) **Write short notes on:**
 - 3A) A medical intern while introducing the oesophagoscope, felt resistance at certain sites during the procedure. Give the anatomical reason for its resistance while passing the oesophagoscope. (4)
 - 3B) Describe the interior of the organ which acts a muscular reservoir of urine. (4)
 - 3C) A 51-year-old male presented to the surgery OPD with bleeding while passing stools and a painless mass in the perianal region. On examination with a proctoscope the surgeon saw three swellings in the 3, 7 and 11'o clock positions. Analyze the case and mention the blood supply of the viscera involved with a note on the reason for the swellings. (4)
 - 3D) A 16-year-old boy received a severe kick in the right flank while playing football at school. On

- examination in the emergency department, his right costovertebral angle was extremely tender on palpation. A specimen of urine collected showed blood in urine. Illustrate the anterior and posterior relations of the organ involved (4)
- 3E) A 40 year old female presents with upper abdominal pain. The pain worsen on eating fatty food and was radiating to the tip of right shoulder. Frequently, the pain begins in the epigastric region and then localizes to the right hypochondriac region. On examination murphy's sign was positive. Analyze the case and identify the structure affected. Describe its parts and arterial supply. (4)
- 3F) Describe the histological features of small intestine where submucosal glands are present which secretes bicarbonate. (4)
- 3G) Describe the histological features of cortex of kidney (4)
- 3H) Discuss the functional areas present on either side of central sulcus with relevant applied aspects (4)
- 3I) Describe the features of the floor of the cavity of the hindbrain (4)
- 3J) Name the extraocular muscles of eyeball and list out their actions (4)
- 3K) Describe the nerve supply and actions of intratympanic muscles. (4)
- 3L) Describe the microanatomical features of retina. (4)
- 3M) Discuss the fate of the genital ducts in male embryo and the hormone responsible for their development (4)
- 3N) Describe the microanatomical features of the thyroid gland (4)
- 3O) Classify chromosomal abnormalities and give an example for each. (4)

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