

Question Paper

Exam Date & Time: 15-Mar-2023 10:20 AM - 01:00 PM)



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

Marks: 80

Duration: 160 mins.

All questions are compulsory. Write brief, clear, relevant and legible answers.

Illustrate your answers with diagrams and flow-charts wherever appropriate.

1. Following an injury suffered during a soccer game, an 18-year-old boy complains of joint pain. The orthopedician examines this joint and during a particular test notices that, the tibia moves too much backwards under the distal part of femur.
 - 1A) Name the joint, that is examined and list all the ligaments of this joint. (4)
 - 1B) Analyse the case and mention the structure injured. Describe its proximal and distal attachments. (3)
 - 1C) Discuss on the locking and unlocking mechanism of this joint. (3)

2. A 58-year-old patient was brought to the emergency department with complaints of severe constricting type of chest pain. The pain radiated to the neck & left upper limb. Coronary angiography revealed blocks in the three main arteries and the coronary artery bypass grafting was advised.
 - 2A) List the three main arteries of the heart. Mention their origin, course, branches and distribution. (8)
 - 2B) Give reason for the pain radiating to the neck and upper limb. (1)
 - 2C) Mention any two vessels, which can be used as grafts for the bypass surgery in this patient. (1)

3. **Write short notes on:**
 - 3A) Draw the labelled diagram of the nerve, which arises from the spinal cord and exits the vertebral canal through the intervertebral foramen. (4)
 - 3B) Describe the formation and fate of the primitive streak. (4)
 - 3C) Explain with suitable diagrams, the process of formation of female gametes. (4)
 - 3D) Explain the histology of the primary lymphoid organ, which develops from the third pharyngeal pouch.(4)
 - 3E) Describe the microscopic structure of the large sized vein. (4)
 - 3F) During the examination, the doctor noticed that the patient was not able to hold the paper in between the fingers, when the paper was being pulled. Analyse the case and describe the muscles, which are being tested here. (4)
 - 3G) A 45-year-old woman complains of painful and weakened shoulder movements and the case was diagnosed as 'quadrangular space syndrome'. Describe the nerve, that is affected in this case. (4)

- 3H) Describe the fibrous band, which runs obliquely on the back of the wrist. (4)
- 3I) Following a laryngeal surgery, a nerve loop on the anterior wall of carotid sheath is anastomosed with the recurrent laryngeal nerve to restore phonation. Explain about this nerve loop with a suitable diagram. (4)
- 3J) Describe the structures that form the floor of the inguinal canal. (4)
- 3K) Describe the osseocartilaginous structure, on which the Little's area is located. (4)
- 3L) In a 72-year-old patient with history of aspiration, the bronchoscopy revealed food in the right superior lobar bronchus. List the bronchopulmonary segments, affected by this obstruction. Explain the other bronchopulmonary segments in this lung. (4)
- 3M) During cardiac surgery of a 65-year-old male, the cardiac surgeon places his fingers in a sinus to place a vascular clamp upon the great vessels exiting the heart. Explain this sinus. (4)
- 3N) Describe the histology of the epiglottis with a suitable diagram. (4)
- 3O) Describe the development of interventricular septum. Add a note on embryological basis of ventricular septal defect. (4)

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Question Paper

Exam Date & Time: 17-Mar-2023 10:20 AM - 01:00 PM)



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

Marks: 80

Duration: 160 mins.

All questions are compulsory. Write brief, clear, relevant and legible answers.

Illustrate your answers with diagrams and flow-charts wherever appropriate.

1. A 45 year old female patient presented at the OPD with a small lump in the axilla. Examination revealed a growth in the gland, present superficially in the pectoral region. Answer the following questions on the gland involved in this case.
 - 1A) Describe the gross features of the gland. (4)
 - 1B) Explain the lymphatic drainage of this gland. (4)
 - 1C) Give anatomical basis of any two clinical manifestations of carcinoma involving this gland. (2)

2. While taking history of a patient in the Neuro OPD, the physician observed that the patient was unable to produce proper speech. He had difficulty in finding the right word to express what he wished to say, but had no difficulty in understanding, what others said. Analyse the case and answer the following questions.
 - 2A) Name the functional area with Brodmann's numbers, affecting speech in this case. (1)
 - 2B) Mention the other associated speech areas. (2)
 - 2C) Name the surface of brain where this area is located. (1)
 - 2D) Illustrate the sulci and gyri on this surface with important functional areas. (6)

3. **Write short notes on:**
 - 3A) Describe the interior of the cul-de-sac that forms the commencement of the large intestine. (4)
 - 3B) Describe the parts and relations of the organ located in the fossa on the visceral surface of the liver. (4)
 - 3C) Plain radiograph of the abdomen done on a patient complaining of pain radiating from loin to groin, revealed a calculus in the muscular tube in front of the tip of the transverse process of a lower lumbar vertebrae. Name the muscular tube and describe its abdominal relations. (4)
 - 3D) CT abdomen in a patient revealed a loop of small intestine herniating into the lesser sac through a vertical slit like foramen. Describe the boundaries of this foramen. (4)
 - 3E) Mention the boundaries of the non-peritoneal triangular area present on the posterior surface of the liver. Name the gland related to this particular area. (4)

- 3F) Illustrate the microscopic anatomy of the part of small intestine which has plenty of glands in its submucosa. (4)
- 3G) Mention the developmental sources of the kidney. Add a note on its congenital anomalies. (4)
- 3H) During a neurological examination, loss of taste and general sensations was observed over the posterior one- third of the tongue. Name the nerve affected in this case and mention its nuclei. Enumerate its branches. (4)
- 3I) Tabulate the afferent and efferent fibres passing through the peduncle connecting the cerebellum to the midbrain. (4)
- 3J) Mention any two features of each of the structure in the middle ear that are connected to one another by joints. (4)
- 3K) Enumerate the three parts of the middle vascular coat of the eyeball and briefly describe each part. (4)
- 3L) Draw the microanatomy of the cerebellar cortex. (4)
- 3M) List derivatives of mesonephric duct in males. (4)
- 3N) Illustrate the microscopic anatomy of the vas deferens. (4)
- 3O) Karyotyping of a person identified the chromosomal abnormality as 47, XXY. Name the syndrome and give its clinical features. (4)

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