

# Question Paper

Exam Date & Time: 09-Nov-2023 (10:20 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST PROFESSIONAL YEAR MBBS DEGREE EXAMINATION - NOVEMBER 2023

SUBJECT: ANATOMY - PAPER - I

(CBME BATCH - REGULARS)

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 28-year-old man presents with the complaints of fever, headache and thick nasal discharge since two days. He explains that the pain starts as soon as he wakes up in the morning, and gradually increases its peak by midday and then slowly subsides. On examination, there was tenderness above the medial part of roof of orbit. Doctor explains that it is because of the infection of a paranasal air sinus. Analyze the given case and answer the following questions:
  - 1A) Name the affected paranasal air sinus. Name the wall of the cavity into which it drains. (2)
  - 1B) Describe all the features seen on this wall of the cavity into which this paranasal air sinus opens. (5)
  - 1C) Explain the arterial supply of this wall. (3)
  
2. A 35-year man fell down from his bike and struck the ground with his outstretched left upper limb. He experienced severe pain and limitation of movement of his left shoulder. On examination, normal rounded contour of the shoulder was lost, fullness was noted below the lateral part of the clavicle, under the coracoid process. Movement of his shoulder was weak, skin sensation over the lower part of deltoid was lost. Based on the anatomy of this region, answer the following questions:
  - 2A) Analyze the given case and give reason for the loss of normal round contour over shoulder and fullness below the lateral part of the clavicle. (2)
  - 2B) Comment on the statement, "Skin sensation over the lower part of deltoid was lost". (1)
  - 2C) Tabulate the movements taking place at the affected joint with the muscles bringing about these movement. (5)
  - 2D) Mention the arterial supply of the joint. (2)
  
3. **Write short notes:**
  - 3A) Describe the types of anastomosis with example. (4)
  - 3B) Nucleus pulposus of the intervertebral disc is the remnant of this embryonic structure. Name this structure and describe its development. (4)

- 3C) Describe development of chorionic villi. (4)
- 3D) Name and illustrate the microscopic features of a ganglion that is part of a structure present on either side of vertebral column. (4)
- 3E) Describe the microscopic structure of lymphatic tissue situated in the lateral wall of oropharynx. (4)
- 3F) During a gang fight, the front of thigh of a man was cut by a sharp knife and a muscle forming the lateral boundary of the femoral triangle was severed. Name the injured muscle. Explain the attachment, nerve supply and actions of this muscle. (4)
- 3G) A person was sitting on the edge of a chair for a long duration while working experienced paraesthesia in the lower limb because of compression of a nerve. Name the compressed nerve. Describe the origin, course and branches of it. (4)
- 3H) A patient complaints of burning, tingling and pain in the sole of foot because of compression of tibial nerve deep to a retinaculum of foot. Explain the attachments of this retinaculum and mention other structure passing deep to it. (4)
- 3I) Superior and inferior epigastric vessels are the contents of this aponeurotic sheath in the anterior abdominal wall. Describe the formation of this sheath. (4)
- 3J) Superficial part of the submandibular salivary gland is situated in a triangle of the neck. Name the muscles forming the antero-inferior and postero-inferior boundary of this triangle. Mention its attachments and nerve supply. (4)
- 3K) Describe the interior of the chamber of heart into which major veins of the body drain. (4)
- 3L) While recording the blood pressure, the doctor auscultates pulsation of a vessel in the cubital fossa. Name this blood vessel. Mention its origin and branches. (4)
- 3M) Name the vein, which is a content of the carotid sheath. Mention its origin, termination and tributaries. (4)
- 3N) Describe the microscopic structure of the tube that connects the larynx with principal bronchus. (4)
- 3O) List the four major changes occurring in the vascular system soon after birth. (4)

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# Question Paper

Exam Date & Time: 11-Nov-2023 (10:20 AM - 01:00 PM)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**FIRST PROFESSIONAL YEAR MBBS DEGREE EXAMINATION - NOVEMBER 2023**  
**SUBJECT: ANATOMY - PAPER - II**  
**(CBME BATCH - REGULARS)**

**Marks: 80**

**Duration: 160 mins.**

**Answer all the questions.**

**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 male patient presented at the urology OPD with difficulty in urination since few weeks. Ultrasound abdomen revealed retention of urine in its reservoir, causing its enlargement. The urologist later decides to drain the urine
  - 1A) Name the enlarged organ, give its location when empty (1)
  - 1B) Describe the external features and relations of the organ when empty (6)
  - 1C) Enumerate its ligaments (3)
  
- 2) A patient presented at the neuro OPD with spastic paralysis of the opposite half of the body affecting the upper limb, trunk and lower limb. This was due to rupture of an artery supplying the part of the projection fibre through which the concerned tracts passes. Analyse the case and answer the following
  - 2A) Name the projection fibre and specify the part involved in this case (2)
  - 2B) Tabulate the different parts of this projection fibre with their fibre components (5)
  - 2C) Describe the arterial supply of the projection fibre (3)
  
- 3) **Write short notes on:**
  - 3A) Describe the interior of the part of the duodenum which maybe obstructed by annular pancreas anomaly. (4)
  - 3B) The anal canal is divided into upper and lower parts by a line which represents the embryological site of attachment of the anal membrane. Name the line and tabulate differences in development and blood supply of the two parts. (4)
  - 3C) Enumerate the coverings of the kidney from within outwards and add a note on the false capsule. (4)
  - 3D) Describe the first stage of rotation of the midgut and add a note on anomalies of midgut rotation. (4)
  - 3E) Illustrate the microscopic anatomy of the liver. (4)
  - 3F) A patient presented at the OPD with drooping of the upper eyelid and lateral squint due to injury to a cranial nerve. Analyse the case and name the nerve. Mention its distribution. (4)
  - 3G) Name the cavity of the diencephalon and enumerate its boundaries. (4)

- 3H) One of the extraocular muscle is supplied by the cranial nerve which emerges from the dorsal aspect of the midbrain. Name the muscle and describe its attachments and action. (4)
- 3I) A patient with chronic suppurative otitis media was also found to have acute mastoiditis. Mention the route of spread of infection and its location. Describe the other features in the wall that separates the two infected cavities. (4)
- 3J) Illustrate the microscopic anatomy of the inner nervous coat of the eyeball. (4)
- 3K) In nulliparous adult women each of the female gonad lies on a peritoneal depression in the lateral pelvic wall. Describe the boundaries of the peritoneal depression. (4)
- 3L) Describe the blood supply of the endocrine gland situated on the upper pole of the kidney (4)
- 3M) Illustrate the microscopic anatomy of the organ which produces the male gamete. (4)
- 3N) Describe the development of the thyroid gland. Add a note on its anomalies. (4)
- 3O) Karyotyping of a person identified the chromosomal abnormality as Trisomy 21. Name the syndrome and give its clinical features. (4)

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