

# Question Paper

Exam Date & Time: 02-Sep-2024 (10:20 AM - 01:00 PM)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**FIRST PROFESSIONAL YEAR MBBS DEGREE EXAMINATION - SEPTEMBER 2024**  
**SUBJECT: AN101THP1 - ANATOMY - PAPER - I**  
**(PY-1, CBME SCHEME - 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 male suffered a midshaft fracture of the humerus following a road traffic accident. On examination, there was loss of extension of the wrist and fingers, and loss of supination in the extended elbow. A weak extension of the elbow was still possible.

Analyze the given case and answer the following:

- 1A) Name the nerve affected and the site of injury that led to the above mentioned clinical features (2)
- 1B) Describe the course and distribution of the affected nerve in this case. (5)
- 1C) Give reason for the weak extension at the elbow (1)
- 1D) Name the other sites where this structure is likely to get injured (2)

2. A 55-year-old chronic smoker visited the hospital with complaints of loss of weight over a period of three months, persistent cough and blood-stained sputum. Investigations revealed a tumor located near the cardiac notch of a lobe of the lung

- 2A) Name the affected lobe and side of the lung in this case (1)
- 2B) Illustrate the bronchopulmonary segments of the affected lung (4)
- 2C) Define and describe characteristic features of the bronchopulmonary segments (4)
- 2D) Mention the clinical significance of the segments (1)

3. **Write short notes:**

- 3A) Enumerate any four modifications of deep fascia and state function of each. (4)
- 3B) Describe neurulation. (4)
- 3C) Compare and contrast between the microscopic features of the muscles of the body wall and heart. (4)
- 3D) Illustrate the microscopic structure of the ganglia that has multipolar neuron. (4)
- 3E) A 40-year-old presented with a swollen foot following an injury. Investigation revealed that the head of the talus had displaced inferiorly and thereby causing the arch of the foot to flatten. Describe the arch that could be affected due to displacement of the talus (4)
- 3F) A patient sustained injury to the hip after he falls from a tree. On examination it was observed that the patient had difficulty in lateral rotation of the hip. Enumerate the lateral rotators with their nerve supply. (4)

- 3G) A patient with popliteal aneurysm presented with a pulsatile midline swelling in a fossa. Illustrate the boundaries of this fossa and enumerate its contents. (4)
- 3H) Describe the attachments, nerve supply and action of the muscle which forms the posterior boundary of the triangle that contains the ansa cervicalis. (4)
- 3I) Tabulate the movements and the muscles producing the movement at the temporomandibular joint. (4)
- 3J) The clinician is feeling for the pulse of an artery just below the midinguinal point. Name the artery, mention its branches and one other clinical importance. (4)
- 3K) Name the sinus of the pericardium that lies behind the left atrium. Describe its boundaries. (4)
- 3L) Name the chamber of the heart where the pacemaker is located. Describe the internal features of the chamber. (4)
- 3M) A large defect in the septum of the heart is one of the manifestations of Tetralogy of Fallot. Enumerate manifestations of this condition and mention the components that contribute to the development of the septum affected in this condition (4)
- 3N) Illustrate the microscopic features of the fibroelastic cartilaginous tube that bifurcates at the level of T4 (4)
- 3O) Etiquettes in the dissection hall (4)

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# Question Paper

Exam Date & Time: 04-Sep-2024 (10:20 AM - 01:00 PM)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**FIRST PROFESSIONAL YEAR MBBS DEGREE EXAMINATION - SEPTEMBER 2024**  
**SUBJECT: AN101THP2: ANATOMY - PAPER - II**  
**(PY-1, CBME SCHEME - 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 child was taken by his mother to a neurologist and complained that the size of head of her son is unusually large and his eyes look different from other children. On examination, the neurologist found tensed anterior fontanelle, widely separated cranial sutures, and typical sun setting appearance of the eyes.
  - 1A) What is the medical term given for this clinical condition? (1)
  - 1B) Mention the cavities of prosencephalon. (1)
  - 1C) Mention the parts of the 'C' shaped cavity situated within the cerebral hemisphere. (2)
  - 1D) Explain the boundaries of its different parts. (6)
2. A 64-year-old man had a one-year history of difficulty, urgency and frequency of micturition. On per rectal examination, a firm, glandular mass was felt anteriorly. Based on the knowledge of clinical anatomy, answer the following questions:
  - 2A) Name the organ involved. (1)
  - 2B) Mention its capsules and lobes. (3)
  - 2C) Describe the structures located within this organ. (3)
  - 2D) Add a note on its arterial supply and venous drainage. (3)
3. **Write short notes on**
  - 3A) A college student eats lunch in a restaurant and the next day, he suffers from pain in the epigastric region. Describe the relations of the posterior surface of this mostly 'J' shaped organ involved. (4)
  - 3B) Describe and discuss the role of a physician in health care system. (4)
  - 3C) Explain the supports of the muscular reservoir of urine. (4)
  - 3D) During the clinical examination, the doctor asks a patient to protrude his tongue. It was observed that the tongue deviates to the left side. Which nerve is affected in this patient and mention its side of involvement. Describe the attachments of the muscle, which is being clinically tested in this patient. (4)

- 3E) A professor of surgery dictates to her postgraduate student that, there is referred pain over the tip of the right shoulder in this patient and there is inflammation of the organ, which stores and concentrates the bile. Describe the organ inflamed. (4)
- 3F) A 32-year-old female patient sustains injury to the face and a soft structure, which runs across the masseter muscle and opens into the vestibule of mouth is cut. Explain the course of this structure in detail, along with the structures pierced by it. Add a suitable diagram. (4)
- 3G) A chronic diabetic patient was advised to undergo dialysis treatment as his serum creatinine levels were very high. Illustrate the micro anatomy of the organs, which are failed in this patient. (4)
- 3H) A chronic alcoholic patient suffers from recurrent pain abdomen, which often radiates to the back. The ultrasound was suggestive of chronic inflammation of a retroperitoneal organ, which is soft, lobulated and elongated. Describe the development of this organ and mention any one of its developmental anomalies. (4)
- 3I) Illustrate the transverse section of medulla oblongata at the level of sensory decussation. (4)
- 3J) During post-mortem, the forensic surgeon discovered that the cerebral hemispheres were not interconnected. Describe the largest commissure, connecting the two. (4)
- 3K) Add a note on the peripheral parasympathetic ganglion, which is located in the orbit. (4)
- 3L) Illustrate the histology of the largest part of the brain. (4)
- 3M) Describe the development of the largest superficial vascular endocrine gland of the neck. (4)
- 3N) The parents of a one-year old child could not palpate his testicles in the scrotum. The paediatrician examines the child and palpates the testes in the inguinal canal. What is the name of this clinical condition. Explain the descent of the male gonad. (4)
- 3O) What is sex chromatin? Write a short note on Lyon's hypothesis. (4)

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