

Question Paper

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



MANIPAL ACADEMY OF HIGHER EDUCATION
FIRST PROFESSIONAL YEAR MBBS DEGREE EXAMINATION - JANUARY 2024
SUBJECT : ANATOMY - PAPER - I
(CBME BATCH)

Marks: 80

Duration: 160 mins.

Answer all the questions.

Essay questions:

- 1) A 5-year-old boy is admitted to the emergency department after he was knocked from his feet by a young longhorn steer. MRI examination reveals a large hematoma (collection of blood) around the knee. Physical examination reveals that the patient suffers from the "unhappy triad".
 - 1A) Name the structures involved in this case. (2)
 - 1B) Enumerate the bones forming the joint involved in this case. (2)
 - 1C) Enumerate the ligaments of the joint. (3)
 - 1D) List the movements and muscles involved. (3)

- 2) A 26-year-old -male brought to the emergency department with complaint of sudden collapse and loss of consciousness for few minutes. He recovered spontaneously but was extremely weak and breathless. Radiological examination revealed pulmonary embolism resulted due to the dislodged thrombus from ear like appendage of the heart
 - 2A) Where is the thrombus formed in this case? (1)
 - 2B) Describe the internal feature of the chamber of the heart involved (6)
 - 2C) Explain the origin and branches of artery supplying the chamber involved (3)

- 3) **Write short notes on:**

(15X4 marks = 60 marks)

 - 3A) Describe the typical spinal nerve with illustration.
 - 3B) A 35-year-old male body builder has enlarged his shoulder muscles to such a degree that the size of the quadrangular space is greatly reduced. Which structure would most likely be compressed in this condition? Describe the course and ranches of the nerve involved.
 - 3C) Discuss the formation and fate of the structure which induces the development of the vertebral column.

- 3D) A 45 year old man was not able to open the mouth following an accident. Describe the attachments and relations of the muscle affected in this case.
- 3E) Describe the microscopic anatomy of primary lymphoid organ of mediastinum
- 3F) A sick person lying supine in bed, aspirates some fluid into her lung leading to the obstruction of 3 bronchus resulting in pneumonia. The surgeon plans conservative lung surgery to remove only the affected part. Describe the anatomy of independent functional unit of lung.
- 3G) Explain the process of metamorphosis of spermatids into spermatozoon.
- 3H) A 30 year old pregnant woman came to doctor with a complaint of burning pain along the lateral 3 1/2 digits, pain while flexing the wrist and difficulty in finger movements. On examination the Tinel's sign was positive. Describe the distribution of the structure involved in the hand.
- 3I) Draw a neat labelled diagram of the microscopic anatomy of the cartilage present in the trachea. Discuss its characteristic features
- 3J) Name the unpaired vein present in right side of the posterior mediastinum. Add a note on its formation, termination, and tributaries
- 3K) Name the major openings of the largest muscle of respiration. Enumerate the structures passing through them
- 3L) Draw a neat labelled diagram of the microscopic anatomy of the bronchus and bronchiole. Enumerate their histological differences.
- 3M) Following surgery for the breast cancer, a 30 year old house maid complains of difficulty in pushing the object or lifting the object over her head. Identify the clinical condition. Describe the origin, insertion, and nerve supply of the muscle involved
- 3N) An 87-year-old woman presented with difficulty in breathing. A chest radiograph reveals left pleural effusion. Describe the most dependent part of the pleural cavity involved in erect posture
- 3O) Describe the development of the interatrial septum. Add a note on its anomaly

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Question Paper

Exam Date & Time: 06-Jan-2024 (10:20 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION
FIRST PROFESSIONAL YEAR MBBS DEGREE EXAMINATION - JANUARY 2024
SUBJECT: ANATOMY - PAPER - II
(CBME BATCH)

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 60-year-old male presented with complaint of midline nodular swelling in front of his neck that moved up and down during swallowing. Physical examination showed there was tachycardia, tremors and slight bulging of eyes. He underwent surgery but postoperatively suffered from loss of sensation within the larynx below the level of vocal cords and hoarseness of voice.
 - 1A) Analyze the given case and name the nerve involved leading to the above mentioned symptoms. (1)
 - 1B) What is the reason for the movement of swelling up and down during swallowing? (2)
 - 1C) Describe the parts, coverings and relations of the glandular structure involved. (7)

- 2) A 50-year-old female presented to the hospital casualty with severe headache and generalized convulsions. She developed right sided facial paralysis & diplopia (double vision) with limited outward movement of eyeball, which was associated with left sided hemiparesis. CT Scan revealed, thrombosis of a blood vessel supplying that part of the brainstem. Analyse the case and answer the following questions.
 - 2A) Which part of the brainstem is involved? (1)
 - 2B) Enumerate and give reasons for the characteristic symptoms. (3)
 - 2C) Discuss briefly the external features of the structure involved. (2)
 - 2D) Illustrate with a neat labelled diagram, the level of section of the brainstem involved in this case. (4)

- 3) **Write short notes:**
 - 3A) Describe the largest peritoneal fold that is attached to the greater curvature of the stomach. (4)
 - 3B) This tubular structure on the face drains the largest salivary gland. Discuss its course and add a note on its opening. (4)
 - 3C) This system of ducts along with a hollow viscus is responsible for storage, concentration and timely release of bile into the second part of duodenum. Name this apparatus and enumerate its components. (4)
 - 3D) Describe the boundaries and features of the triangular area present within an organ which is the reservoir of urine. (4)

- 3E) Discuss briefly the interior of the most fixed part of small intestine, which is present anterior to the right kidney. (4)
- 3F) Illustrate and describe the microscopic features of the jejunum. (4)
- 3G) A retroperitoneal glandular structure presented with a developmental anomaly of encircling the second part of duodenum. Name this anomaly and discuss the development of this soft lobulated viscera. (4)
- 3H) Describe the nuclei present in the subtentorial part of the brain consisting of two hemispheres. (4)
- 3I) Illustrate and describe the sulci, gyri and functional areas on the medial surface of cerebral hemisphere. (4)
- 3J) The majority of the outer fibrous coat of the eyeball is opaque and white. Name this layer and enumerate the structures piercing it. (4)
- 3K) A 7-year-old boy was rushed to casualty with complaint of pencil injury in the ear. The doctor examined the ear with otoscope and diagnosed it as a case of perforation of the ear drum. Discuss briefly the gross features and mention the nerve supply of the perforated structure. (4)
- 3L) Illustrate with a neat labelled diagram of microanatomy of the caudal most part of central nervous system present in vertebral canal. (4)
- 3M) Ultrasound examination of a 34-year-old female confirmed the absence of the uterus. Name the embryological structure that has failed to develop. Enumerate the fate of this structure in both the sexes. (4)
- 3N) Illustrate the microscopic features of the Graafian follicle. (4)
- 3O) Describe the characteristic clinical features of the chromosomal abnormality with an extra chromosome 21. (4)

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