

Question Paper

Exam Date & Time: 25-Feb-2022 10:20 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION FIRST MBBS DEGREE (CBME) EXAMINATION – FEBRUARY/MARCH 2022 SUBJECT: ANATOMY - PAPER I

Marks: 80

Duration: 160 mins.

Answer all the questions.

1. A 22-year old man went for physical examination as a part of recruitment in Indian Army. He was rejected from employment because of his flat feet.
 - 1A) Explain the anatomical basis and the effect of flat foot. (3)
 - 1B) Compare and contrast the longitudinal arches of foot. (7)

2. A profusely sweating 45 year old engineer was brought to casualty with complaints of sudden onset of chest pain that was radiating to the medial side of his left arm and neck. His heart rate was 50/min, BP was 180/120mm. ECG revealed anterior wall myocardial infarction, involving partially the interventricular septum. He was stabilized, advised surgery, following which some of his upper and lower limb vessels were evaluated.
 - 2A) Interpret the case and describe the blocked artery. (4)
 - 2B) Analyse partial involvement of interventricular septum. (2)
 - 2C) Reason out radiating pain in the left arm and neck. (2)
 - 2D) Justify the evaluation of limb vessels. (2)

- 3A) Describe pulmonary and systemic circulation. (4)
- 3B) A patient had an inferior dislocation of shoulder joint. On examination patient was unable to abduct his shoulder and had sensory loss over the lower half of deltoid muscle. Analyse the case and describe the structure involved. (4)
- 3C) Describe the process of implantation. List the abnormal sites of implantation. (4)
- 3D) Explain the muscle of mastication that causes depression of temporomandibular joint. (4)
- 3E) Illustrate the microscopic anatomy of the hemo-lymphatic organ closely related to the left colic flexure. (4)
- 3F) A 15-year old girl had fever, headache and nasal block. X ray revealed opacity in the region below the floor of the orbit. Analyse the case and describe the affected paranasal air sinus. (4)
- 3G) Enumerate the prenatal diagnostic tests. What is amniocentesis? (4)
- 3H) This joint is affected in a patient who has difficulty in opposition movement of thumb. Name the joint and list its ligaments and other movements (4)
- 3I) Illustrate microscopic anatomy of ganglion that is part of a structure present on either side of vertebral column. (4)

- 3J) A cardiologist is performing a coronary catheterization through an artery of the front of thigh. Explain the course and list the branches of the artery chosen for the procedure. (4)
- 3K) A 21 year old male patient was diagnosed to have a hernia, that protruded through an opening in the fascia transversalis. Explain the openings of the canal through which the hernial contents pass. (4)
- 3L) Discuss the microscopic anatomy of the cartilage of larynx that forms the anterior boundary of laryngeal inlet. (4)
- 3M) Explain the origin, insertion, nerve supply and action of the muscle that forms the medial boundary of cubital fossa. (4)
- 3N) Enlargement of the left ventricle of heart compresses this surface of the lung. Illustrate with a labelled diagram the relations of this surface of the affected lung. (4)
- 3O) Enumerate the components and their derivatives contributing in the development of right atrium. (4)

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Question Paper

Exam Date & Time: 26-Feb-2022 10:20 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION FIRST MBBS DEGREE (CBME) EXAMINATION – FEBRUARY/MARCH 2022 SUBJECT: ANATOMY - PAPER II

Marks: 80

Duration: 160 mins.

All questions are compulsory.

Write brief, clear, relevant and legible answers

1. In a 60-year-old male, with complaints of double vision, physical examination showed there was ptosis, lateral strabismus, dilated and fixed pupil and loss of accommodation reflex. Computer tomographic (CT) revealed dilation of internal carotid artery in its cavernous part compressing more on its lateral aspect.
 - 1A) Analyze the given case and name the structure involved leading to the above mentioned signs & symptoms. (1)
 - 1B) Describe the origin, course and distribution of the structure involved. (5)
 - 1C) Draw a neat labeled diagram of the transverse section of the part of the brainstem where the nucleus of the structure involved is located. (4)

2. A 50 year old female visited surgery department and complained of hard painless mass in the upper and outer portion of her left breast. The physical examination revealed peau d'orange appearance of skin. The mass was hard and immobile. The nipple was retracted.
 - 2A) Describe the anatomical basis of peau d'orange appearance of skin, retraction of nipple and loss of mobility of the breast? (3)
 - 2B) Name the structures lying deep to the base of the breast. (2)
 - 2C) Describe the lymphatic drainage of the breast. (5)

3. Short Notes:
 - 3A) Describe the peritoneal fold that is attached to the greater curvature of the stomach. (4)
 - 3B) The right and the left colic flexures are related as anterior relations to the corresponding kidneys. Illustrate the other relations of this surface of the kidney on both sides. (4)
 - 3C) Describe the interior of the terminal part of the large intestine (4)
 - 3D) Describe the boundaries and features of the triangular area present within the muscular reservoir of urine. (4)
 - 3E) Tabulate the anatomical differences between the two parts of the small intestine suspended by mesentery. (4)

- 3F) Illustrate and describe the microscopic features of the oesophagus. (4)
- 3G) Ultra-sonographic examination of a newborn baby showed bilateral enlarged kidneys with multiple renal cysts. Analyse the case and explain the embryological reason for this anomaly. (4)
- 3H) Illustrate and describe the sulci, gyri and functional areas of frontal lobe of cerebral hemisphere. (4)
- 3I) Illustrate and describe the boundaries of the cavity of diencephalon that communicates with the adjacent cavities above via interventricular foramen and below via cerebral aqueduct. (4)
- 3J) In a 35-year-old male, investigated for deafness, it was found that abnormal ossification of annular ligament that attaches footplate of stapes to oval window had impeded its movement. Which wall of the middle ear is affected here and describe the other features in this wall of the cavity that lodges the stapes. (4)
- 3K) Illustrate and describe the compartments of the eyeball. (4)
- 3L) Illustrate different layers of microanatomy of the retina? (4)
- 3M) In a new-born male baby, the paediatrician noticed that the right scrotal sac was empty, however the external genitalia was normal. Ultrasound examination confirmed the presence of the male gonad in the inguinal canal. Give the medical term for this anomaly. Explain the descent of the male gonad. (4)
- 3N) Illustrate the histology of the endocrine gland that is enclosed by the renal fascia. (4)
- 3O) Describe the characteristic clinical features of the only viable monosomic condition in human beings found only in females. (4)

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