



RAN-2006000101010001

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1st MBBS Examination November - 2023

Human Anatomy : Paper - I

Set - 2 (New CBME)

Time: 3 Hours]

[Total Marks: 100

સૂચના : / Instructions

(1) નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:
1st MBBS

Name of the Subject :
Human Anatomy : Paper - I - Set - 2 (New CBME)

Subject Code No.: 2006000101010001

Seat No.:

Student's Signature

- (2) Write each section in separate answer sheet.
- (3) Draw neat and labelled diagrams wherever necessary.
- (4) Figure to the right indicates maximum marks.
- (5) In section A, all MCQs are compulsory, only one answer will be accepted, no Negative marking and answers will be marked with blue / black pen on OMR sheet and must be submitted within 30 minutes.

Section - A : MCQ

20 Marks

1. Which of the following is not the modification of deep fascia — ?
A. Extensor retinaculum B. Extensor digital expansion
C. Flexor retinaculum D. Fibrous flexor sheath
2. Which dermatome overlies the thumb — ?
A. T1 B. C5
C. C6 D. C7
3. Anterior dislocation of the lunate leads to injury of —
A. Median nerve B. Ulnar nerve
C. Radial nerve D. Anterior interosseous nerve

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12. Which of the following is not a branch of internal carotid artery — ?
- A. Posterior communicating B. Anterior choroidal
C. Posterior choroidal D. Anterior cerebral
13. Supramarginal gyrus is located in —
- A. Inferior frontal gyrus B. Superior frontal gyrus
C. Inferior temporal gyrus D. Inferior parietal lobule
14. Olfactory receptor cells are —
- A. Unipolar neurons B. Bipolar neurons
C. Pseudounipolar neuron D. Multipolar neuron
15. Which of the following is not the feature of hyaline cartilage — ?
- A. Chondrocytes in lacunae
B. Chondrocytes arranged in clusters (isogenous groups)
C. Lightly stained territorial matrix
D. Found in costal cartilage
16. Tunica adventitia is thickest in which of the following blood vessel —
- A. Large sized artery B. Large sized vein
C. Medium sized artery D. Arteriole
17. During spermatogenesis, Second meiotic division gives rise to —
- A. Primary spermatocytes B. Secondary spermatocytes
C. Spermatids D. Spermatozoa
18. 1st pharyngeal cleft forms —
- A. Internal auditory meatus B. External auditory meatus
C. Tympanic cavity D. Epitympanic recess
19. Muscle with parallel fibres are all except —
- A. Sartorius B. Rectus abdominis
C. Sternohyoid D. Tibialis anterior
20. Which one of the following is the example of capacitance vessel — ?
- A. Elastic artery B. Large vein
C. Muscular artery D. Arteriole

Section - B

Q. 2. Case base question. (2 out of 3) 16 Marks

A. A 40 years old female suddenly developed inability to move her left upper limb and left lower limb and also complain of double vision. On examination lateral squint was observed in right eye. It was diagnosed as a vascular lesion in the brain stem. (2 + 3 + 3)

1. Specify the anatomical structures involved.
2. Draw a labeled diagram at the level of lesion and name the syndrome.
3. Give the anatomical basis of the sign and symptoms.

B. A carpenter injured his right index finger by sharp iron nail. After about 3 days, he developed fever and his right index finger was swollen and painful. (1 + 2 + 2 + 3)

1. Name the structure in the index finger that is likely to be inflamed.
2. What is this clinical condition called? If the condition is neglected or not treated then what happened.
3. The infections of which fingers are more dangerous and why.
4. Write a note on extensor digital expansion.

C. A 26 year old woman survived he knife attack, but was injured in the neck. She was rushed to the hospital as having profuse bleeding. On examination, it was found there was no deep cut in the neck. She was breathless, cyanotic and had low blood pressure. On auscultation, churning and splashing sounds masked the normal heart sounds. The physician suspected venous air embolism. (1 + 2 + 5)

1. Name the vein that is injured & exposed to atmospheric air.
2. Give the anatomical reason why vein was not able to contract after injury.
3. Describe the formation, termination and tributaries of the injured vein.

Q. 3. A. Write short note on any 2 out of three. 10 Marks

- a. Rotator cuff and its applied aspect.
- b. Posterior interosseous nerve – its origin, course, muscle supplied and applied aspect.
- c. Define anastomosis. Write a note on anastomosis around elbow joint.

B. Write short note on.

10 Marks

a. First arch syndrome.

OR

Intra-embryonic mesoderm.

b. Development of Adrenal gland with its clinical correlation.

OR

Development of Face and its anomalies.

C. Write short note on any one out of two.

4 marks

1. Describe the components of lymphatic system.
2. Classification of muscle according to their arrangement of muscle fibres.

Section - C

Q. 4. Write a note on any 2 out of 3.

16 marks

- i. Describe mandibular nerve in details. Add a note on connections of otic ganglion.
- ii. Constrictor muscles of pharynx - origin, insertion, nerve supply, structures passing between the constrictors with applied aspect Write a note on sinus morgagni.
- iii. Scalp under following heading - Nerve supply, Blood supply and venous drainage. Write a note on safety valve haematoma.

Q. 5. A. Write a short note. (2 out of 3)

10 Marks

1. Explain visual reflexes.
2. Describe cavernous sinus under following headings —
 - (a) Location and formation
 - (b) Relations
 - (c) Contents
 - (d) Communications
 - (e) Applied aspect
3. Draw a well labeled diagram showing Sulci, gyri and functional areas on the superolateral surface of the cerebral hemisphere.

B. Write short Note.

10 Marks

- 1) Histology of Transitional epithelium or Histology of Dorsal root ganglion.
- 2) Histology of Pituitary gland or Histology of Cerebellum.

C. Short note. (any one)

4 Marks

1. Describe different types of glial cells with their functions.
 2. Growth of a long bone.
 3. Implantation.
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Ist MBBS Examination November - 2023

Human Anatomy : Paper - II

Set - 3 (New CBME)

Time: 3 Hours]

[Total Marks: 100

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(1) નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
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Name of the Examination:
Ist MBBS

Name of the Subject :
Human Anatomy : Paper - II - Set - 3 (New CBME)

Subject Code No.: 2006000101010002

Seat No.:

Student's Signature

- (2) Write each section in separate answer sheet.
- (3) Draw neat and labelled diagrams wherever necessary.
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Section - A : MCQ

20 Marks

1. Cystic fibrosis is —
 - A. Autosomal dominant disorder
 - B. Autosomal recessive disorder
 - C. X-Linked recessive disorder
 - D. X-Linked dominant disorder
2. When a segment of DNA is transferred from one non-homologous chromosome to another, it is called —
 - A. Deletion of a segment of DNA
 - B. Duplication of a segment of DNA
 - C. Inversion of a segment of DNA
 - D. Translocation of a segment of DNA

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3. All the parts of GIT are solely derived from foregut except —
 - A. Stomach
 - B. Esophagus
 - C. Duodenum
 - D. Pharynx

4. Dorsal pancreatic bud forms all parts of the pancreas, except —
 - A. Upper part of head
 - B. Body
 - C. Tail
 - D. Uncinate process

5. While observing a histology slide of testis, the student notices a row of cells resting on the basement membrane of the seminiferous tubule. Which of the following cells were observed by the student — ?
 - A. Spermatids
 - B. Spermatogonia
 - C. Primary spermatocyte
 - D. Leyding cells

6. Which is true regarding the portal lobule of the liver — ?
 - A. It is hexagonal in shape
 - B. Central vein present in the centre
 - C. Bile flows towards the centre of the lobule
 - D. Plates of hepatocytes appear radiating from the centre of the lobule

7. Nerve likely to be injured in posterior dislocation of the hip joint is —
 - A. Superior gluteal nerve
 - B. Sciatic nerve
 - C. Inferior gluteal nerve
 - D. Pudental nerve

8. Regarding peroneus longus, which statement is not correct — ?
 - A. It arises from the fibula
 - B. It grooves the cuboid bone
 - C. It passes deep to both superior and inferior peroneal retinaculum
 - D. It is inserted into the base of the 5th metatarsal

9. Anteroposterior stability of the knee joint is maintained by —
 - A. Oblique popliteal ligament
 - B. Arcuate popliteal ligament
 - C. Cruciate ligaments
 - D. Medial and lateral collateral ligaments

10. Largest and most important branch of the posterior tibial artery is —
 - A. Circumflex fibular artery
 - B. Peroneal artery
 - C. Lateral planter artery
 - D. Medial planter artery

11. All are the muscles of the third layer of sole except —
- A. Flexor hallucis brevis B. Adductor hallucis
C. Abductor hallucis D. Flexor digiti minimi brevis
12. All statements are correct about thoracic duct except —
- A. It begins as an upward continuation of cistern chili
B. It enters the thoracic cavity through an aortic opening in the diaphragm
C. It crosses the vertebral column from right to left side in front of T5 vertebra
D. It terminates in the external jugular vein
13. Foramen secundum is present in —
- A. Septum secundum B. Septum primum
C. Septum intermedium D. Septum spurium
14. Anteriorly the trachea is related to aU except —
- A. Arch of aorta B. Left brachiocephalic vein
C. Oesophagus D. Deep cardiac plexus
15. All are correct regarding oblique sinus of pericardium except —
- A. It is the recess of pericardial cavity
B. It lies behind the left atrium
C. It lies behind the right atrium
D. It is closed on all sides except below
16. The neurovascular plane in the anterior abdominal wall lies between —
- A. External & internal oblique muscles
B. Internal & trans verses abdominis muscles
C. Transverses abdominis muscle & fascia transversalis
D. Fascia transversalis & parietal peritoneum
17. All statements are correct about psoas major muscle except —
- A. It arises from all the lumbar vertebrae
B. It contains the lumbar plexus within the substance
C. It is pierced by the genitofemoral nerve
D. It is the chief extensor of the hip joint

18. All are the tributaries of inferior vena cava except —
- A. Right suprarenal vein B. Left suprarenal vein
C. Right renal vein D. Left renal vein
19. All statements are correct about duodenum except —
- A. It is the most fixed part of the small intestine
B. It is about 25 cm long
C. It extends below the level of umbilicus
D. It produces an impression on the visceral surface of the liver
20. The posterior surface of the head of pancreas is related to all except —
- A. Inferior vena cava B. Aorta
C. Terminal parts of renal veins D. Bile duct

Section - B

Q. 2. Case base question (2 out of 3). 16 Marks

- A. A 20 year old healthy male went to recruitment in the Army. He fulfilled all the physical requirements except that he was having flat feet, so he was rejected. (1 + 2 + 1 + 2 + 2)
1. What is flat foot?
 2. Give the anatomical basis of the collapse of the medial longitudinal arch.
 3. What is the keystone of the medial longitudinal arch?
 4. What are the effects of flat foot?
 5. Define inversion and eversion movements; name the joints where these movements take place.
- B. A 65 year old man who suffered myocardial infarction was admitted to the cardiothoracic surgery ward for coronary bypass surgery. The surgeon used patient's long saphenous vein and reversed it for bypass surgery. (1 + 1 + 1 + 1 + 2 + 2)
1. What is myocardial infarction?
 2. What is coronary bypass surgery?-
 3. Why was the long saphenous vein used in coronary bypass surgery?
 4. Why was the implanted segment of the long saphenous vein reversed?
 5. Name the arteries supply the cardiac muscle & mention their origin.
 6. What is the difference between the angina pectoris & myocardial infarction (MI)?

C. A 15-year-old (riding a bicycle) got an accident. He was hit in the perineum with a sharp object. He did not pass urine after the trauma, during examination, the urethra was crushed against the edge of the pubic bones. The urine reaches deep to the anterior abdominal wall but not into the thigh. The rupture of urethra was diagnosed. (1 + 2 + 2 + 1 + 2)

1. What is the length and extent of male urethra?
2. Enumerate the parts of male urethra and the region of their location. Which part of urethra is the narrowest & least dilatable?
3. Give the reason of extravasation of urine deep to the anterior abdominal wall.
4. What prevents the urine from entering the thigh from the anterior abdominal wall?
5. Write about sphincters of the urethra.

Q. 3. A. Write short note on any 2 out of 3. 10 Marks

1. Common peroneal nerve - origin, course, Branches and its applied aspect.
2. Menisci in details with their function. Which meniscus is more prone to injury and why?
3. Femoral sheath in details. Add a note on anatomical basis of femoral hernia.

B. Write short note on – 10 Marks

1. Comparison between Microscopic features of thick and thin skin or Comparison between Microscopic features of skeletal and cardiac muscle.
2. Microscopic features of lung. Add a note on pneumocytes or Microscopic features of kidney.

C. Short note on any one out of two. 4 Marks

1. Various tests used for prenatal diagnosis.
2. Autosomal recessive disorder.

Section - C

Q. 4. Write short note on any two out of 3. 16 Marks

1. Describe inguinal canal in detail and its mechanisms to maintain the integrity of the inguinal canal. Write down the difference between direct and indirect inguinal hernia.

2. Describe portal vein in details. Give the different sites and anatomical basis of portocaval anastomosis.
3. Describe uterus under following - location and parts, axis, relations and blood supply. Add a note on anatomical basis of prolapse of uterus.

Q. 5. A. Write short note on any two out of 3. 10 Marks

1. Superior vena cava - its formation, course, tributaries, termination. What happened if superior vena cava gets blocked?
2. Describe pleura. Add a note on anatomical basis of pleural effusion.
3. Describe posterior Mediastinum. Add a note on mediastinal syndrome.

B. Write short note on any two out of 3. 10 Marks

1. Coarctation of aorta
2. Hypospadias
3. Development of pancreas and its anomalies.

C. Write short note on any one. 4 Marks

1. Barium studies
2. Describe professional qualities and roles of a physician
3. Bony landmarks for inferior extensor retinaculum in lower limb and structures passing beneath it.