RAN - 2006000101010002

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Ist MBBS Examination November - 2023

Human Anatomy : Paper - II

Set - 3 (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:

☛ **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.
(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. 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

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. Pudendal 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 5^{th} 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 lumber 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 derails. 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.

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