

Q.P. Code: 112001**Reg. no.:****First Professional MBBS Degree Regular/Supplementary Examinations
July 2024****Human Anatomy Paper II****Thorax, Abdomen & Pelvis, Lower Limb with Concerned Embryology & Histology****Time: 3 Hours****Total Marks: 100**

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers
- Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary

1. Multiple Choice Questions**(20x1=20)****The Answers to MCQ questions (Q.No. i to Q.No. xx) shall be written continuously on the first two writing sheets (ie Page No. 3 & 4) only****Questions i-v are single response type questions**

- All are branches of superior mesenteric artery EXCEPT:
 - Right colic
 - Middle colic
 - Left colic
 - Ilio colic
- Feature of interior of right atrium is:
 - Trabeculae carneae
 - Musculi pectinati
 - Septomarginal trabeculae
 - Moderator band
- Ductus deferens develops from
 - Mesonephric duct
 - Paramesonephric duct
 - Mullerian duct
 - Gartner's duct
- Corpora amylacea is a microscopic feature seen in:
 - Testis
 - Prostate gland
 - Epididymis
 - Seminal vesicle
- Which of the following is used as an antifungal agent in the embalming fluid
 - Thymol crystals
 - Isopropyl alcohol
 - Glycerine
 - Eosin

Question vi-x are case scenario-based questions:

A 10 year-old boy was admitted in the hospital with complaints of jaundice, itchy skin, vomiting and pale fatty stools. CT revealed pancreatic tissue encircling the duodenum.

- Which part of the duodenum is involved in this boy
 - First
 - Second
 - Third
 - Fourth
- Jaundice in this boy is due to obstruction of
 - Common bile duct
 - Major pancreatic duct
 - Common hepatic duct
 - Cystic duct

1(PTO)

- viii. Tail of the pancreas lies in the:
- Gastrosplenic ligament
 - Lienorenal ligament
 - Gastrophrenic ligament
 - Transverse mesocolon
- ix. The part of pancreas developing from the ventral pancreatic bud
- Tuber omentale
 - Upper part of head of pancreas
 - Uncinate process
 - Tail of pancreas
- x. All the following arteries supply the pancreas EXCEPT:
- Superior pancreaticoduodenal artery
 - Inferior pancreaticoduodenal artery
 - Splenic artery
 - Left gastric artery

Question numbers xi-xv consists of two statements-Assertion (A) and Reason (R). Answer these questions by selecting the appropriate options given below.

- xi. A: The long head of biceps femoris is grouped under hamstrings.
R: Long head of Biceps femoris originates from ischial tuberosity, inserted into fibula and is innervated by tibial component of sciatic nerve.
- Both A and R are true, and R is the reason for A
 - Both A and R are true, and R is not the reason for A
 - A is correct but R is incorrect
 - A is incorrect but R is correct
- xii. A: During sternal puncture a thick needle is inserted into upper part of manubrium sternum.
R: Arch of aorta lies behind the lower part of manubrium sternum
- Both A and R are true, and R is the reason for A
 - Both A and R are true, and R is not the reason for A
 - A is correct but R is incorrect
 - A is incorrect but R is correct
- xiii. A: Lateral meniscus of knee is seldom injured in football players
R: Fibular collateral ligament is not attached to the lateral meniscus
- Both A and R are true, and R is the reason for A
 - Both A and R are true, and R is not the reason for A
 - A is correct but R is incorrect
 - A is incorrect but R is correct
- xiv. A: Left ventricular hypertrophy is a feature of Fallot's tetralogy of heart
R: Pulmonary stenosis is also a feature of Fallot's tetralogy of heart
- Both A and R are true, and R is the reason for A
 - Both A and R are true, and R is not the reason for A
 - A is correct but R is incorrect
 - A is incorrect but R is correct
- xv. A: Fluid collection in pouch of Douglas occurs in rupture of tubal pregnancy
R: Fluid collected in the pouch of Douglas can be drained through posterior fornix of vagina
- Both A and R are true, and R is the reason for A
 - Both A and R are true, and R is not the reason for A
 - A is correct but R is incorrect
 - A is incorrect but R is correct

2(PTO)

Question numbers xvi-xx are multiple response type questions. Read the statements & mark the answers appropriately.

- xvi. Which of the following statement/s is /are true about transverse sinus of pericardium?
- Anteriorly it is bounded by ascending aorta and pulmonary trunk
 - Posteriorly it is bounded by left atrium
 - During cardiac surgery it is used to ligate aorta and pulmonary trunk
 - Develops due to degeneration of dorsal mesocardium
- a) i, ii, iii
b) i, iii, iv
c) i, ii, iv
d) ii, iii
- xvii. Which of the following statement/s is /are true about coeliac trunk?
- Arises as a dorsal branch of abdominal aorta
 - Arises at the level of T12-L1 junction
 - Gives rise to left gastric artery, splenic artery and common hepatic artery as its branches
 - Arises at the level of L3 vertebra
- a) i, ii, iii
b) iii, iv
c) i, ii, iv
d) ii, iii
- xviii. Which of the following statement/s is /are true about cervical canal?
- Presents with arbor-vitae appearance in its interior
 - Extends from internal os to external os
 - In multiparous women the external os is vertical with right and left lips
 - Endocervix is lined by columnar epithelium
- a) i, ii, iii
b) i, iii, iv
c) i, ii, iv
d) ii, iii
- xix. True about great saphenous vein is/are
- Superficial vein of lower limb
 - Terminates into femoral vein
 - Receives deep external pudendal vein
 - Passes in front of the lateral malleolus
- a) i, ii
b) i, ii, iii
c) i, iv
d) i, iii
- xx. Which of the following statement/s is /are true about the pectinate line of anal canal?
- Represents embryologically two different sources of development
 - Below the line the anal canal is supplied by inferior rectal vessels
 - Lymphatics from the anal canal inferior to the line drain into internal iliac nodes
 - Part of the anal canal superior to the line is insensitive to pain
- a) i, ii, iii
b) i, iii, iv
c) i, ii, iv
d) i, ii

Long essays**(2x10=20)**

2. A 23-year-old pregnant woman who did not go for regular antenatal screening delivered a full-term baby weighing 2kg. Soon after birth the baby was found to be dyspnoeic and vomited continuously after every feed. CT was done for the newborn and it revealed herniation of stomach and intestines into the left side of thoracic cavity.

With your knowledge in anatomy, answer the following:

- Name the structure that is defectively developed in this newborn.
 - Describe the attachments of this structure.
 - Mention the innervation and actions of this structure.
 - Mention the openings in this structure and structures passing through them.
 - Describe the development of this structure. **(1+2+2+3+2)**
3. Describe sciatic nerve under following headings: root value, course and relations, branches and clinical anatomy. **(1+4+3+2)**

Short Essays:**(6x6=36)**

- Describe the boundaries, contents and applied anatomy of ischiorectal fossa. **(2+3+1)**
- Describe the development of kidney and its associated anomalies. **(4+2)**
- Describe the microscopic features of fundus and pyloric part of stomach. **(3+3)**
- Describe the longitudinal arches of foot and their clinical anatomy. **(4+2)**
- Describe the recesses of pleura and their clinical significance. **(4+2)**
- Describe the presenting parts, interior, microscopic structure of urinary bladder. **(2+2+2)**

Short Notes:**(6x4=24)**

- Describe the anatomical basis of femoral hernia.
- Briefly explain the intercostal muscles.
- Mention the boundaries of epiploic foramen and its clinical anatomy.
- Describe the factors stabilizing the ankle joint.
- Reflect on the statement "Respect for Cadaver in the dissection hall".
- Draw a neat labelled diagram of the anterior view of arteries supplying the heart.
