

001/24

The West Bengal University of Health Sciences
MBBS 1st Professional Examination (New Regulation),
November - December 2024

Subject: Anatomy

Paper : I

Full Marks: 100

Time: 3 hours

Attempt all questions. The figures in the margin indicate full marks.

1. a) A middle aged lady presents with indigestion, dyspepsia and burning pain in the right upper quadrant of her abdomen, which is also referred to the tip of her right shoulder. Using your knowledge of anatomy, answer the following: 1+2+6+4+2
 - i) Which organ is most likely to be affected?
 - ii) Mention its blood supply.
 - iii) Mention the structures/organs related to the visceral surface of the liver.
 - iv) Describe briefly the histology of liver.
 - v) Name the structures passing through the Porta hepatis.
b) A child is brought to the orthopedics OPD with acute severe trauma to the elbow, with a palpable bony lump in the cubital fossa and elbow in midprone position with inability to move the joint. 3+6+3+3
 - i) Explain the above situation.
 - ii) Describe the joints of pronation and supination under the following headings: types of joints, ligaments attached, muscles acting and the mechanism of movements produced.
 - iii) Name the blood supply and nerve supply to these joints.
 - iv) What is tennis elbow and golfers elbow?
2. a) Write down the histological features of trachea. Draw a suitable diagram. 5+5
b) A bulky mass covered with membrane was detected in umbilical cord of newborn. What is this anomaly? Discuss the rotation of gut during development and reason of this anomaly. Give an outline of malformations related to Vitello intestinal duct. 1+4+2+3
c) What is spermiogenesis? What is capacitation and what is its importance? What will happen if there is no zona reaction? What are the main results of fertilization? What is ectopic implantation? 1+2+2+3+2
3. Write short notes on the following: 2x5
 - a) General plan of histology of gastro intestinal tract with diagram.
 - b) Role of physician in body donation after death.
4. Explain the following statements: 5x4
 - a) Fracture of the scaphoid of the wrist is often associated with avascular necrosis of the proximal segment.
 - b) Implantation is initiated when the blastocyst comes into contact with the uterine wall.
 - c) Pectinate line is an important landmark of anal canal.
 - d) Osteoblasts are buried alive.
 - e) Ureteric colic may radiate from loin to groin.

5. Choose the correct option for each of the following: 10x1
- i) Enzyme secreted by a sperm which helps in its penetration into the ovum:
 - a) Protease.
 - b) Hyaluronidase.
 - c) Carboxylase.
 - d) Dehydrogenase.
 - ii) Axillary sheath is derived from:
 - a) Investing layer of deep cervical fascia.
 - b) Pretracheal layer of deep cervical fascia.
 - c) Prevertebral layer of deep cervical fascia.
 - d) Pectoral fascia.
 - iii) Remnants of mesonephric tubules / duct include all except:
 - a) Paroophoron.
 - b) Epioophoron.
 - c) Duct of Gartner.
 - d) Colliculus seminalis.
 - iv) Each of these muscles is inserted on first rib except:
 - a) Scalenus anterior.
 - b) Scalenus posterior.
 - c) Scalenus medius.
 - d) Latissimus dorsi.
 - v) All are tributaries of portal vein except:
 - a) Superior mesenteric vein.
 - b) Right gastric vein.
 - c) Inferior mesenteric vein.
 - d) Inferior hemiazygos vein.
 - vi) Mammary glands are formed from:
 - a) Neural crest.
 - b) Ectoderm.
 - c) Endoderm.
 - d) Mesoderm.
 - vii) The large intestine is characterized by the following:
 - a) Well developed plica circularis.
 - b) Numerous sub mucosal glands.
 - c) Deep intestinal glands and predominance of goblet cells.
 - d) Numerous peneth cells in intestinal glands.
 - viii) Which of the following statements regarding interossei of the hand is true?
 - a) They arise from tendons of flexor digitorum profundus.
 - b) They flex metacarpophalangeal joints and extend interphalangeal joints.
 - c) Palmar interossei cause abduction.
 - d) Palmar interossei have 2 heads of origin.
 - ix) True regarding urinary bladder is:
 - a) The act of micturition is exclusively under the control of sympathetic nerves.
 - b) The trigonal muscle is supplied by the sympathetic nerves.
 - c) The act of micturition is under the control of both sympathetic and parasympathetic.
 - d) Post ganglionic fibres from the superior mesenteric ganglion supply the urinary bladder.
 - x) All are true regarding broncho pulmonary segment except:
 - a) It forms an independent respiratory unit.
 - b) Branches of pulmonary artery are segmental in distribution.
 - c) Pulmonary veins are intersegmental.
 - d) Segments are wedge shaped with the base directed towards the root of the lung.