

001/26

**The West Bengal University of Health Sciences
MBBS 1st Professional Examination (New Regulation),
February-March, 2026**

Subject: Anatomy
Paper: I

Full Marks: 100
Time: 3 hours

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

1. A 45 year old male attended the OPD with wrist drop after long term use of axillary crutches. Which nerve was most likely involved here? Mention its formation, a short course and branches of the nerve in arm and forearm. With a schematic diagram mention the sensory supply of dorsum of hand. Explain development of wrist drop in this case. 1+(2+3+5)+1+1+2
2. Explain the following statements: 5x3
- i) Urine leaking out through umbilicus in a new born baby.
 - ii) In Prostatic carcinoma, malignant cells may spread to the vertebral column.
 - iii) Pleural space may be injured during exposure of kidney from back.
 - iv) Inner layer of myometrium acts as 'Living ligature' during menstruation and parturition.
 - v) Fibula violates laws of ossification.
3. Short questions(Applied aspect): 4x5
- i) Anatomical basis of the features of Erb-Duchenne palsy.
 - ii) Boundaries, contents and clinical importance of ischioanal fossa. 2+1+2
 - iii) Mention the common sites of internal haemorrhoids with a suitable diagram. Why pectinate line is considered as an important landmark of the anal canal? 3+2
 - iv) Different anomalies of the Vitello-intestinal duct (Omphalomesenteric duct).
4. Short notes: 3x6
- i) Mention the role of Ductus arteriosus and Ductus venosus during foetal life. What are the changes occur in blood circulation after birth? 2+4
 - ii) Write down about the features of interior of the prostatic urethra with a suitable diagram. Explain the anatomical basis of urinary obstruction due to benign prostatic hyperplasia. 3+3
 - iii) Mention the major openings of the thoraco abdominal diaphragm with their vertebral level and the structures passing through them. 6
5. Write short notes on the following: 4x5
- i) Write in brief on the following with reference to "the cadaver as the first teacher"- 3+2
 - a) Significance of cadaver in medical education.
 - b) Role of Cadaver in fostering empathy and professionalism.
 - ii) Draw a labelled diagram of the microstructure of hyaline cartilage. Give two examples of this type of cartilage.
 - iii) The mesentery.
 - iv) Interatrial septum of the heart.
6. Choose the best answer among all of the following – 12x1
- i) A 50 year old male undergoes surgery for gastric ulcer. The surgeon ligates the left gastric artery. Which structure is most likely to have compromised blood supply?
a) Fundus of the stomach b) Pylorus of the stomach c) Duodenum d) Spleen
 - ii) A 55 year old woman presents with a hard, fixed lump in her left breast. Upon examination, the doctor noted a dimpling of the skin over the lump. A biopsy confirms breast carcinoma. The

- dimpling of the skin observed in this patient is most likely caused by the infiltration of cancer cells along which anatomical structures?
- The lactiferous ducts causing them to retract.
 - The suspensory ligaments of Cooper anchoring the parenchyma to the skin.
 - The external oblique aponeurosis fixing gland to the rectus sheath.
 - The pectoralis major muscle leading to the fixation of the breast.
- iii) A rugby player suffers a direct blow to the shoulder. The force of the impact causes a fracture of the clavicle. The weight of the upper limb is primarily transmitted to the axial skeleton through which ligament?
- Costo-clavicular ligament
 - Coraco-clavicular ligament
 - Acromio-clavicular ligament
 - Interclavicular ligament
- iv) A thoracic surgeon is performing a thoracoscopy to investigate a mediastinal mass. During the procedure he identified a vein that arches forward over the root of the right lung to terminate in the superior vena cava. Based on the text which vein has the surgeon identified?
- The left superior intercostal vein
 - The hemi-azygos vein
 - The accessory azygos vein
 - The azygos vein
- v) A pregnant woman at 10 weeks of gestation undergoes a routine ultrasound. The report mentions a "Swelling at the base of the umbilical cord". What is the most likely cause of this finding?
- Physiological umbilical herniation of intestinal loops
 - Omphalocele
 - Gastroschisis
 - Meckel's diverticulum
- vi) A 4 month old infant is observed breathing predominantly with abdominal movements. Based on the provided text, which of the following is the most likely anatomical reasons for this?
- The diaphragm is not fully developed in infants.
 - The infant's ribs are still horizontal, so the intercostals muscles cannot increase the thoracic diameters.
 - The intercostal nerves are not yet myelinated.
 - The infant's lungs are not yet fully compliant.
- vii) A 16 year old boy is brought to the emergency department with pain and swelling of his right wrist after falling from his bike onto a flexed, outstretched hand. An X-ray of the forearm shows a fracture of the distal radius. The fractured bone displaced a carpal bone in the palmar direction, resulting a nerve compression within the carpal tunnel. Which of the following carpal bones is most likely dislocated?
- Scaphoid
 - Trapezium
 - Capitate
 - Lunate
- viii) A 28 year old man presents with chronic epigastric discomfort, particularly after eating. During endoscopy, a biopsy was taken. The histological examination reveals the following features: simple columnar lining epithelium with presence of numerous glands in the sub-mucosa, which secrete alkaline mucus. Which part of the GI tract is this?
- Oesophagus
 - Duodenum
 - Ileum
 - Colon
- ix) Following blunt trauma left upper abdomen, a patient develops abdominal distension, fall of BP, increased pulse rate after some hours and the patient looks pale. Probable injury is:
- The diaphragm tear
 - Liver rupture
 - Stomach injury
 - Spleen rupture
- x) CT scan of chest revealed enlarged hilar lymph nodes. Which of the following structures is most superior at the hilum of left lung?
- Pulmonary artery
 - Pulmonary vein
 - Primary bronchus
 - Bronchial artery
- xi) A 55 year old man was diagnosed with left testicular carcinoma. Which of the following lymph nodes is the first to be involved?
- Pre caval lymph node
 - Para-aortic lymph node
 - Iliac lymph node
 - Inguinal lymph node
- xii) A malignant tumor in the cutaneous zone of the anal canal would most likely metastasize (spread) to which group of lymph nodes?
- Inferior mesenteric
 - Pararectal
 - Sacral
 - Superficial inguinal