



001/24

**The West Bengal University of Health Sciences**  
**MBBS 1<sup>st</sup> Professional Examination (New Regulation),**  
**August 2024**

Full Marks : 100  
Time: 3 hours

Subject: Anatomy  
Paper : II

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

1. a) A 47 year old neglected hypertensive man reported to hospital emergency with complaint of spontaneous epistaxis (bleeding from nose) On speculum examination, bleeding point is located in the anterior aspect of the nasal septum.  
i) Mention the commonest site of such bleeding with its anatomical perspective.  
ii) Discuss nasal septum under the head – formation, nerve supply and lining epithelium.  
iii) Mention boundary and the importance of the dangerous area of face. 1+3+3+2+2+1+3  
b) A new born child presented with a moderate sized cystic swelling over the head and diagnosed as Hydrocephalus.  
i) What is hydrocephalus and what are its types?  
ii) Write a flow chart of CSF circulation.  
iii) Describe the floor of fourth ventricle with a labelled diagram. 1+2+4+8
2. a) An obese patient presented with flat foot due to flattening of the arches of the foot.  
i) Name the arches of the foot.  
ii) What are the factors maintaining the arches of the foot?  
iii) Give the most vulnerable parts of the different arches. 1+4+1+4  
iv) Give the functions of the arches.  
b) Describe briefly different speech centres in the human brain along with labelled diagram. Enumerate different types of aphasia with their anatomical explanation. Occlusion of which artery may lead to different types of aphasia? 5+4+1  
c) Following operation of the thyroid gland, a patient developed hoarseness of voice.  
i) State the possible cause of the hoarseness.  
ii) Give a brief note on muscles acting on vocal cord.  
iii) Discuss the important relations and arterial supply of the thyroid gland.  
iv) Mention based on your anatomical knowledge what precautions are to be taken by a surgeon during the operation of the thyroid gland? 1+3+2+2+2  
2x5
3. Write short notes on the following:  
a) Layers of cornea.  
b) Chromosomal aberrations. 5x4
4. Explain the following statements:  
a) Hemisection of spinal cord may cause flaccid paralysis of limb on the same side of the lesion.  
b) Macular sparing occurs after occlusion of posterior cerebral artery.  
c) Fracture of skull at the region of pterion may cause extradural haemorrhage.  
d) Great saphenous vein is chosen for coronary artery bypass grafting.  
e) A rapidly growing mole on the dorsum of foot may be associated with inguinal lymphadenopathy.

**P.T.O**



5. Choose the correct option for each of the following: 10x1
- i) In peripheral vascular disease involving occlusion of femoral artery in adductor canal, which of the artery will provide collateral circulation to the thigh?
- a) Descending branch of lateral circumflex femoral artery.    b) Descending genicular artery.  
c) Obturator artery.    d) First perforating branch of arteria profunda femoris.
- ii) All of the following statement regarding the pterygopalatine fossa are correct except-
- a) Lesser (superficial) petrosal nerve passes through it.  
b) It communicates with nasal cavity through sphenopalatine foramen.  
c) It contains the deep petrosal nerve.  
d) Third part of maxillary artery reaches there through the pterygomaxillary fissure.
- iii) Middle meatus of the nose bears all the following openings except -
- a) Anterior ethmoidal air sinus    b) Middle ethmoidal air sinus.  
c) Maxillary air sinus.    d) Sphenoidal air sinus.
- iv) The lining epithelium of vocal fold is
- a) Simple squamous.    b) Pseudo-stratified ciliated columnar.  
c) Stratified squamous non-keratinised.    d) Simple cuboidal.
- v) All are true regarding the pituitary gland except-
- a) Median eminence of tuber cinerium belongs to neurohypophysis.  
b) Inferiorly related to the sphenoidal air sinuses.  
c) Entirely developed from Rathke's pouch.  
d) Supplied by the branches of internal carotid artery.
- vi) Following multiple fractures of facial bones, loss of taste sensation to tip of tongue is found, which is due to involvement of :
- a) Submandibular ganglion.    b) Pterygopalatine ganglion.  
c) Geniculate ganglion.    d) Trigeminal ganglion.
- vii) All of the following are true about the cerebral aqueduct of sylvius except
- a) Lies medial to the mesencephalic nucleus of the trigeminal nerve.  
b) Surrounded by grey matter.  
c) Lies dorsal to the nucleus of the trochlear nerve.  
d) Connects the fourth ventricle and the subarachnoid space.
- viii) All of the following are attached to anterior clinoid process except:
- a) Carotido-clinoid ligament.    b) Interclinoid ligament.  
c) Free margin of tentorium cerebelli.    d) Attached margin of tentorium cerebelli.
- ix) All are features of X-linked recessive inheritance except:
- a) Homozygous female-carrier.    b) Heterozygous female-carrier  
c) Sons of affected mother are always affected.    d) Sons of affected father are normal.
- x) False statement about medial medullary syndrome is:
- a) It is due to occlusion of the anterior spinal artery.  
b) There is contralateral loss of position and vibration sense due to damage to medial lemniscus.  
c) There is contralateral hemiplegia due to damage to medullary pyramid.  
d) Tongue on protrusion is deviated opposite to paralysed side due to damage to hypoglossal nerve.