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

Subject: Anatomy **Full Marks: 100**
Paper: II **Time: 3 hours**

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

1. A patient is brought to the emergency with contra lateral (opposite side) paralysis (hemiplegia) and sensory loss. It is found subsequently that white fiber of cerebrum is injured at a specific location, due to cerebrovascular accident. 1+2+4+5+3

From your knowledge of anatomy,

i) Name the white fiber most likely affected here.
ii) What are its different parts?
iii) With a suitable diagram mention the relation of the above mentioned white fiber.
iv) Give one table chart mentioning the names of various fibers passing through its different parts.
v) Write in short about the arterial supply of the aforesaid white fiber.

2. Explain the following statements: 5x3

i) Increased intra cranial tension can be diagnosed by ophthalmoscopic examination.
ii) Anteroinferior part of nasal septum is a common site of epistaxis (bleeding from nose).
iii) Peroneus longus muscle supports both longitudinal and transverse arches of foot.
iv) Macular sparing in thrombosis of posterior cerebral artery.
v) Patient with ovarian tumor can have pain in both hip and knee joint.

3. Short questions (Applied aspect): 4x5

i) A 6 month old infant was diagnosed with congenital hydrocephalus. The neurosurgeon explains that the condition might be due to structural abnormalities in brain causing blockage of the flow of cerebrospinal fluid (CSF). 2+3
   a) Mention the sites of formation and absorption of CSF.
   b) What do you mean by communicating and non communicating hydrocephalus?

ii) A bus conductor came to outpatient clinic with swollen twisted prominent veins in his legs, his condition worsened during standing and improved with sitting and leg elevation. 1+4
   a) What was the above condition called?
   b) Mention the factors contribute to the venous drainage of lower limbs.

iii) A middle age female presents with a cystic midline neck swelling below the hyoid bone. The swelling moves with deglutition. 1+2+2
   a) What do you think is the most likely condition of the patient?
   b) Mention the source of development of the thyroid gland.
   c) Write down about the arterial supply of the gland.

iv) A fish bone stuck in the piriform fossa of pharynx was removed by the doctor after the patient had come to the hospital with suggestive history of swallowing fish bone. 1+2+1+1
   a) In which part of the pharynx, the piriform fossa is located?
   b) Write down about the boundaries, sensory nerve supply and clinical significance of this piriform fossa.

4. Short notes: 6x3

i) Trace the secretomotor pathway of parotid gland. What is Frey's syndrome? 5+1
ii) First pharyngeal arch and its derivatives. 6
iii) Enumerate any four ligaments of hip joint. Write down the name of different movements occurring in coronal and sagittal plane with mentioning name of one prime mover muscle responsible for each of the movement. 2+4

5. Write short notes on the following: 4x5

i) Turner's syndrome: genetic basis and clinical features.
ii) Floor of 4th ventricle of brain.
iii) Microstructure of cerebellum with a suitable labeled diagram.
iv) Communication skill is an important quality for a physician.

6. Choose the best answer among all of the following: 12×1

i) A 55 year old man loses his ability to understand spoken language but can still produce fluent, nonsensical speech. Which area of brain is damaged?

a) Broca's area b) Wernicke's area c) Primary motor cortex d) Angular gyrus

ii) During a deep surgical incision in the lower part of the thigh, a surgeon notes that the muscles are separated into compartments by three intermuscular septa extending from the fascia lata to the linea aspera of the femur. A particular muscle group, which occupies the interval between the lateral and medial septa, is a focus of the surgery. Which nerve supplies this muscle group?

a) Sciatic nerve (tibial component) b) Obturator nerve
c) Deep peroneal nerve d) Femoral nerve

iii) A 27 year old woman is involved in a road traffic accident. MRI of the head and neck shows a fracture of the petrous temporal bone treated with reconstructive surgery. During subsequent follow-up examination, the patient was found to experience high sensitivity to loud sound. Which of the following muscles is most likely paralyzed?

a) Tensor veli palatini b)Stapedius c)Stylohyoid d) Tensor tympani

iv) A 2-month-old infant is brought to the paediatric clinic for a routine check-up. The mother reports that the baby has been feeding well but seems to have decreased muscle tone. On physical examination, the baby has a flat facial profile, upward slanting palpebral fissures, a single transverse palmar crease, and a protruding tongue. The paediatrician suspects a chromosomal abnormality and advises genetic testing.
Which of the following is most likely chromosomal findings in this case?

a) Trisomy 19 b) Trisomy 21 c) Monosomy X d) 47,XXXY

v) A person attending neurology OPD presents with stooping posture, slow shuffling gait, mask like face and pill-rolling tremor of hands. Area of brain is most likely involved here?

a) Basal Ganglia b) Internal capsule c) Corpus callosum d) Thalamus

vi) A patient had lost cutaneous sensation over the angle of the mandible, which nerve is most likely damaged?

a) Mandibular b) Great auricular c) Auricotemporal d) Supra clavicular

vii) A patient with nasal congestion, nasal discharge, midface, pain, and headache is diagnosed to have maxillary sinusitis. The size of the maxillary hiatus is reduced by all the bones except:

a) Sphenoid concha b) Ethmoid c) Lacrimal d) Inferior nasal

viii) A 62-year-old man present with progressive shortness of breath and stridor (a harsh vibrating noise when breathing), particulary during inspiration. His vocal cords are not properly abducting bilaterally, remaining in a paramedian position. Which muscle abducts the vocal cords?

a) Cricothyroid
b) Posterior cricoarytenoid
c) Lateral cricoarytenoid
d) Thyroarytenoid (external part)

ix) A patient presents with a lesion in the cavernous sinus. Which of the following structures is most likely to be affected?

a) Internal carotid artery b) Occulomotor nerve c) Trochlear nerve d) All of the above

x) "Hassall's corpuscles" are seen in:

a) Spleen b)Thymus c)Liver d) Lymphnode

xi) Spot the correct statement about Argyll Robertson's Pupil from the following:

a) Accommodation reflex is absent but pupillary light reflex is present
b) Accommodation reflex present but pupillary light reflex is absent
c) Both accommodation reflex and pupillary light reflexes are absent
d) Both accommodation reflex and pupillary light reflexes are present

xii) A person presented with loss of vision. Radiological investigations revealed an aneurysm causing damage to the optic chiasma. Which of the following arteries was most likely causing the damage?

a) Anterior choroidal artery
b) Posterior choroidal artery
c) Internal Carotid artery
d) Posterior communicating artery