

001/25

The West Bengal University of Health Sciences
MBBS 1st Professional Examination (New Regulation),
October-November 2025

Subject: Anatomy

Full Marks: 100

Paper: II

Time: 3 hours

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

1. A 45 year old woman presents to the outpatient clinic with sudden onset of drooping of the left corner of the mouth, inability to close the left eye, and absence of forehead wrinkles on the same side. She also complains of altered taste sensation on the anterior part of the tongue and hypersensitivity to sounds on the affected side. 1+2+4+5+3

- i. Which cranial nerve is most likely to be affected in this case?
- ii. What are the functional components of this nerve?
- iii. Write in short about its intracranial course.
- iv. Mention the different branches of this nerve.
- v. Give a brief anatomical explanation of the features of the above scenario.

2. Explain the following statements:

5x3

- i) Vocal cord is considered as watershed line of larynx.
- ii) Patella has an inherent tendency to dislocate laterally.
- iii) Foot drop occurs after the fracture of the neck of the fibula.
- iv) Parotid abscess is very painful.
- v) Syringing of external ear may cause syncopal attack.

3. Short questions (Applied aspect)

4x5

- i) A newborn baby was found to have cleft palate with nasal regurgitation of milk during breast feeding. Explain the congenital defect from your anatomical knowledge with a brief note on development of soft plate. 5
- ii) What are the points of identification in a slide of palatine tonsil? Explain the referred pain in the ear during tonsillitis. 3+2
- iii) Lateral medullary syndrome: Anatomical basis of different clinical features. 5
- iv) A 40 year old male is admitted to the emergency with a deep laceration in his scalp sustained from a fall. On examination, there is profuse bleeding from the wound but no sign of a scalp fracture. Explain the anatomical reason for the profuse bleeding from a scalp wound. Why is a subcutaneous hematoma in this layer localized, whereas a sub-aponeurotic hematoma can spread over the entire dome of the skull? 3+2

4. Short notes:

3x6

- i) Locking and unlocking movements of knee joint. 3+3
- ii) Draw and label the diagram of cross section of Midbrain at the level of superior colliculus. What is Weber's syndrome? 5+1
- iii) Motor and sensory nerve supply of the tongue with reference to its development. 6

5. Write short notes on the following:

4x5

- i) Microstructure of the thyroid gland.
- ii) Branchial cyst and fistula.
- iii) Communication with donor relatives.
- iv) Klinefelter's syndrome.

6. Choose the correct option for each of the following:

12×1

- i) During a hip joint examination, a clinician draws a line from the anterior superior iliac spine to the ischial tuberosity. The highest part of the greater trochanter should normally pass through this line. What is this clinical line known as?
 - a) Bryant's line
 - b) Shenton's line
 - c) Nelaton's line
 - d) Babcock's line
- ii) During a lumbar puncture procedure, a physician needs to identify the L4 vertebral spine. Which bony landmark serves as the most reliable indicator for this spinal level?
 - a) The tip of the greater trochanter
 - b) The ischial tuberosity
 - c) A line joining the posterior superior iliac spines
 - d) The highest point of the iliac crest
- iii) A 50 year old woman presents with progressive difficulty in peripheral vision of both eyes, often bumping into objects while walking. Visual field testing reveals loss of vision in the temporal fields of both eyes. Imaging shows a mass compressing the optic chiasma. Which of the following visual defects is most likely to be present?
 - a) Right homonymous hemianopia
 - b) Left homonymous hemianopia
 - c) Bitemporal hemianopia
 - d) Total blindness
- iv) A 65 year old woman undergoes pelvic surgery for removal of an ovarian mass. Postoperatively, she complains of weakness in bringing her thighs together and numbness on the medial aspect of her thigh. Which of the following nerves is most likely to be injured during the procedure?
 - a) Femoral nerve
 - b) Sciatic nerve
 - c) Obturator nerve
 - d) Ilioinguinal nerve
- v) A 45 year old male presents to the outpatient department with hoarseness of voice for the past 4 weeks. On laryngoscopic examination, the left vocal cord is observed to be immobile and paramedian in position. Which of the following nerves is most likely to be involved in this patient?
 - a) Left superior laryngeal nerve
 - b) Left recurrent laryngeal nerve
 - c) Left glossopharyngeal nerve
 - d) Left hypoglossal nerve
- vi) Following trauma, a patient shows dilated pupil and eye deviated downward and laterally. Which cranial nerve is affected?
 - a) CN III
 - b) CN IV
 - c) CN V
 - d) CN VI
- vii) During a lymph node biopsy in the posterior triangle of the neck, a surgeon accidentally injures a nerve. The patient later presents with difficulty in shrugging the shoulder. Which nerve was most likely injured?
 - a) Phrenic nerve
 - b) Spinal accessory nerve
 - c) Dorsal scapular nerve
 - d) Suprascapular nerve
- viii) A 5 year old child is brought to the pediatric clinic with complaints of ear pain, hearing loss, and fever for the past two days. On otoscopic examination, a bulging tympanic membrane with purulent fluid behind it is noted. The child had multiple upper respiratory tract infections in the past few months. Which of the following factors contributes most to the increased incidence of otitis media in children like this patient?
 - a) Shorter and more horizontal Eustachian tube
 - b) Thinner tympanic membrane
 - c) Larger external auditory canal
 - d) Lower immune response in the middle ear
- ix) A 30 year old man presents in surgery OPD with a small swelling in the neck along the anterior border of sternomastoid muscle. Which will be the probable clinical diagnosis of the condition?
 - a) Enlarged thyroid gland
 - b) Enlarged submental lymph node
 - c) Branchial cyst
 - d) Thyroglossal cyst
- x) Suspecting a malignancy the submandibular salivary gland was resected in a patient who presented with jaw swelling and weight loss. Postoperatively the patient complains of altered sensation in the floor of the mouth. Which nerve has been most likely damaged during resection?
 - a) Auriculotemporal nerve
 - b) Chorda tympani nerve
 - c) Glossopharyngeal nerve
 - d) Lingual nerve
- xi) A female with short stature, webbed neck, low hairline with primary amenorrhea (absence of menstruation) comes to the clinic, diagnosed to have Turner syndrome. Turner syndrome is characterized by:
 - a) Trisomy of chromosome 21
 - b) Monosomy of the X chromosome
 - c) XXY genotype
 - d) Presence of an extra Y chromosome
- xii) Cerebellum primarily coordinates motor functions including balance, posture and precision of voluntary movements. Which of the following cells of cerebellar cortex is mainly excitatory in nature?
 - a) Golgi cells
 - b) Granule cells
 - c) Stellate cells
 - d) Basket cells