2019 and 2024 Scheme

Q.P. Code: 111001 **Reg. no.: ……**

First Professional MBBS Degree Supplementary (SAY) Examinations November 2025

Human Anatomy Paper I

Upper Limb, Head & Neck, Neuroanatomy including General Embryology, General Histology and Genetics

Time: 3 Hours **Total Marks: 100**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers***
- ***Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw table/diagrams/flow charts wherever necessary***

1. Multiple Choice Questions **(20x1=20)**

The **MCQ** questions (Q.No. i to Q.No. xx) shall be answered **only in the OMR sheet provided at page No. 51** of the answer book (the inner portion of the back cover page (PART III)). Responses for MCQs marked in any other part/page of the answer book will not be valued. **For marking the correct responses use X mark only**

Questions i-v are single response type questions

i. The only efferent from cerebellar cortex is
   a) Axons of Purkinje cells
   b) Axons of basket cells
   c) Dendrites of granule cells
   d) Axons of golgi cells

ii. Muscle that is NOT involved in flexion of elbow joint
   a) Biceps brachi b) Brachioradialis c) Brachialis d) Coracobrachialis

iii. Part of fallopian tube where fertilization normally occurs
   a) Infundibulum b) Ampulla c) Isthmus d) Fimbriae

iv. Simple squamous epithelium is found in
   a) Tonsil b) Thin skin c) Urinary bladder d) Endothelium

v. Incudostapedial joint is a type of
   a) Saddle b) Hinge c) Ball and Socket d) Condylar

Question vi-x are case scenario-based questions:

A 45 year old female, presented to OPD with complaints of pricking type of pain over the left half of face. The pain would aggravate on washing face, eating and swallowing. A diagnosis of tic douloureux (trigeminal neuralgia) was made.

vi. Cutaneous sensations over which area of face is not affected in this condition
   a) Tip of nose b) Angle of mandible c) Angle of mouth d) Forehead

vii. Sensory innervation of face is by all **EXCEPT**
   a) Mandibular nerve b) Maxillary nerve c) Facial nerve d) Ophthalmic nerve

viii. Foramen Rotundum transmits
   a) Facial nerve b) Mandibular nerve c) Maxillary nerve d) Ophthalmic nerve

ix. The nerve of first pharyngeal arch is
   a) Mandibular nerve
   b) Maxillary nerve
   c) Glossopharyngeal nerve
   d) Vagus nerve

x. Gasserian ganglion is located in
   a) Anterior cranial fossa
   b) Middle cranial fossa
   c) Posterior cranial fossa
   d) In neck at the level of C-6 vertebra

Question numbers xi-xv consists of two statements - Assertion (A) and Reason (R). Answer these questions by selecting the appropriate options given below.

a) Both A and R are true, and R is the reason for A
b) Both A and R are true, and R is not the reason for A
c) A is correct but R is incorrect
d) A is incorrect but R is correct

xi. **Assertion:** Loculation of pus will lead to extreme tenderness in the pulp spaces of hand.
Reason: Pulp spaces are closed unyielding spaces which intervene between the palmar skin and distal phalanges of all the digits of hand.

xii. **Assertion:** Oogenesis begins in fetal life and then arrested until puberty.
Reason: Final completion of meiosis II will happen only at the time of fertilization

(PTO)

xiii. **Assertion:** Lumbar puncture is done between L_1 and L_2 vertebra
Reason: The dura and arachnoid along with subarachnoid space containing CSF extends upto 2nd sacral vertebra

xiv. **Assertion:** Scalp injuries bleed profusely
Reason: Dangerous layers of scalp is rich in arteries

xv. **Assertion:** Cadaveric oath should be taken by every medical student before starting dissection.
Reason: Cadaver should be handled with due respect

Question numbers xvi-xx are multiple response type questions. Read the statements & mark the answers appropriately.

xvi. Features of X-linked recessive inheritance are
1) Both males and females can carry the affected gene 2) Only females are affected
3) Achondroplasia is an example 4) Hemophilia is an example
a) 1, 3, 4 b) 2, 3 c) 1, 3 d) 1, 4

xvii. Midbrain at the level of superior colliculus contains
1) Trochlear nucleus 2) Oculomotor nucleus
3) Mesencephalic nucleus of trigeminal nerve 4) Red nucleus
a) 1, 2, 4 b) 1, 3, 4 c) 2, 3, 4 d) 1, 2, 3

xviii. The endodermal germ layer gives rise to
1) Kidneys, gonads and their ducts 2) Epithelial lining of urinary bladder
3) Sensory epithelium of nose and eye 4) Epithelial lining of tympanic cavity and auditory tube
a) 1, 3 b) 2, 4 c) 1, 4 d) 2, 3

xix. True about lateral ventricle of brain are
1) Develops from diencephalon 2) Communicates with third ventricle through foramen of magendie
3) Inferior horn extends into the temporal lobe 4) Calcar avis is a feature in the posterior horn
a) 2, 3, 4 b) 1, 3 c) 3, 4 d) 1, 2, 3

xx. Following are the attachments of triceps brachi
1) Supraglenoid tubercle 2) Olecranon process 3) Coracoid process 4) Shaft of humerus
a) 1, 2, 4 b) 2, 3, 4 c) 1, 2, 3 d) 2, 4

Long essays **(2x10=20)**

2. A 35 year old female presented to OPD with complaints of swelling in front of neck for past 3 months. she also complains of progressive weight gain, fatigue, constipation and cold intolerance, a diagnosis of hypothyroidism was made after the lab investigations.
   a) Describe the location, external features and coverings of thyroid gland
   b) Mention the medial and lateral relations of the gland
   c) Describe the arterial supply of the gland with its relation to the corresponding nerves
   d) Briefly describe the histology of thyroid gland. (3+2+2+3)
3. Describe Brachial plexus under the following headings: formation (roots, trunks. divisions, cords), branches and Erb's point. Add a note on Klumpke's paralysis. (3+4+1+2)

Short Essays: **(6x6=36)**

4. Describe the attachments, innervation and actions of muscles of mastication.
5. Illustrate and describe the microscopic anatomy of transverse section of compact bone. Add a note on the functions of periosteum. (4+2)
6. Classify white matter fibres of cerebrum with suitable examples. Add a note on fibres of internal capsule. (4+2)
7. Describe the technique of karyotyping with its applications.
8. Describe the formation of placenta. Add a note on placental barrier. (4+2)
9. Describe the location, drainage and applied anatomy of cervical lymphnodes. Add a note on microscopy of lymphnode. (4+2)

Short Notes: (**6x4=24)**

10. Describe the formation, course, termination and tributaries of external jugular vein.
11. Explain the anatomical basis of wrist drop.
12. Describe the principle of genetic counselling.
13. Explain the structural and functional differences between elastic and muscular arteries.
14. Draw a neat labelled diagram of Circle of Willis.
15. Describe the correct procedure while handling cadavers.

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