2019 and 2024 Scheme

Q.P. Code: 111001 **Reg. no.: ……**

First Professional MBBS Degree Regular/Supplementary Examinations August 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 responses for MCQ questions (Q.No. i to Q.No. xx) shall be written in the space provided for answering MCQ questions 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

Questions i-v are single response type questions

i. Which bone violates the law of ossification
   a) Radius b) Tibia c) Fibula d) Ulna

ii. What type of connective tissue is present in the umbilical cord
   a) Adipose tissue b) Mucoid tissue c) Loose areolar tissue d) Dense irregular tissue

iii. The maternal part of placenta develops from:
   a) Chorion frondosum c) Decidua parietalis
   b) Decidua capsularis d) Decidua basalis

iv. A lesion in which artery will cause lateral medullary syndrome
   a) Superior cerebellar artery c) Posterior inferior cerebellar artery
   b) Anterior inferior cerebellar artery d) Posterior cerebral artery

v. All of the following are basic foundations of good communication **EXCEPT**:
   a) Content b) Context c) Credibility d) Complexity

Question vi-x are case scenario-based questions:

A 30 year old woman came to surgery department with a swelling in the midline of lower part of neck. On examination the swelling moved on deglutition but not on protrusion of the tongue. Palpation of the swelling revealed a multi nodular goiter.

vi. The thyroid swelling moves on deglutition because suspensory ligament of Berry attaches the thyroid gland to:
   a) Hyoid bone b) Thyroid cartilage c) Cricoid cartilage d) Pharynx

vii. The false capsule of the thyroid gland is formed by:
   a) Investing layer of deep cervical fascia c) Prevertebral fascia
   b) Pretacheal fascia d) Carotid sheath

viii. During thyroidectomy the surgeon will ligate the superior thyroid artery very close to the upper pole of lateral lobe of thyroid gland in order to avoid injury to which nerve
   a) Superior laryngeal b) External laryngeal c) Internal laryngeal d) Hypoglossal

ix. If the nerve lying close to superior thyroid artery is cut by mistake which muscle will be paralysed
   a) Thyroarytenoid b) Transverse arytenoid c) Vocalis d) Cricothyroid

x. During thyroidectomy if inferior thyroid artery is ligated very close to the gland which nerve will be injured
   a) Recurrent laryngeal b) Superior laryngeal c) Internal laryngeal d) External laryngeal

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

xi. Assertion: A common site of bleeding from the nose is Little's area
   Reason: Kiesselbach's plexus lies at the anteroinferior part of nasal septum

xii. Assertion: The notochord forms the neural tube
   Reason: The nucleus pulposus of intervertebral disc is a remnant of notochord

xiii. Assertion: Flattening of thenar eminence occurs in carpal tunnel syndrome
Reason: The ulnar nerve gets compressed in carpal tunnel syndrome

xiv. Assertion: In carcinoma of the breast peau d' orange appearance of skin occurs
Reason: Blockage of cutaneous lymph vessels occurs in carcinoma of the breast

xv. Assertion: The Broca's area is located in the lower part of precentral gyrus
Reason: A lesion in the Broca's area will cause motor aphasia

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

xvi. White fibrocartilage is found in:

1) Intervertebral disc	2) Tracheal rings	3) Epiglottis	4) Menisci of knee joint
a) 1, 2, 3	b) 1, 4	c) 2, 3, 4	d) 2, 4

xvii. The intra embryonic coelom forms the following cavities:

1) Pleural	2) Peritoneal	3) Pericardial	4) Oral
a) 1, 2, 3	b) 2, 3	c) 2, 4	d) 2, 3, 4

xviii. The muscles supplied by the deep branch of ulnar nerve are:

1) Palmaris brevis	2) Palmar interossei	3) Adductor pollicis	4) Abductor digiti minimi
a) 1, 2, 3	b) 1, 4	c) 2, 3	d) 2, 3, 4

xix. Transitional epithelium is found in:

1) Ureter	2) Urinary bladder	3) Uterus	4) Fallopian tube
a) 1, 2, 3, 4	b) 1, 2, 3	c) 2, 4	d) 1, 2

xx. The nucleus ambiguus belongs to the following cranial nerves:

1) Glossopharyngeal	2) Vagus	3) Cranial part of Accessory	4) Hypoglossal
a) 1, 2, 4	b) 1, 3, 4	c) 1, 2, 3	d) 2, 3

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

2. A 12 year old boy developed fever and painful swelling just in front and below the lobule of right ear. On examination the right ear lobule was found to be lifted by the swelling. Based on your knowledge of anatomy answer the following questions:
   a) Identify the gland that is swollen
   b) Explain the anatomical basis of pain arising from the swelling
   c) Describe the gross features and relations of this gland
   d) Describe the secretomotor nerve supply of the gland (1+2+5+2)
3. Describe the shoulder joint under the following headings: type of joint, articulating surfaces, ligaments, movements and muscles causing them and applied anatomy (1+1+3+3+2)

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

4. Classify triangles of neck. Explain digastric triangle in detail (2+4)
5. Describe the microscopic structure of hyaline cartilage and elastic cartilage (3+3)
6. Describe the formation, subdivisions and fate of intra embryonic mesoderm (2+2+2)
7. Describe the karyotyping with its applications (4+2)
8. Name the extra ocular muscles. Describe their actions, nerve supply and applied aspects. (1+3+1+1)
9. Describe the boundaries and features of floor of the IV ventricle (2+4)

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

10. Describe the parts and arterial supply of a developing long bone
11. Explain the genetic basis of numerical anomalies of chromosomes
12. Explain the clinical importance of cavernous sinus
13. Explain the anatomical basis of wrist drop
14. Draw a neat labelled diagram of transverse section of midbrain at the level superior colliculus
15. Write your reflection on the cadaver as a teacher of anatomy

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