

**DETAILED SYLLABUS FOR THE POST OF
ASSISTANT PROFESSOR IN ANATOMY
MEDICAL EDUCATION
(Cat.No. 473/2020)**

1. GENERAL ANATOMY [05 Marks]

Epithelium: Classification, Simple and compound epithelium, Glandular and Sensory epithelium cell junction, Connective tissue cells and fibres.

Cartilage – Structure & Types

Bone: Types, Periosteum, cells and matrix. Ossification- Vascularization, regeneration
Vascular system, Lymphatic system, Integumentary system, Nervous system.

Joints: General classification with emphasis to structure and types of synovial joint and movements.

2. GENERAL EMBRYOLOGY & GENETICS [10 Marks]

Introduction, oogenesis, Ovarian cycle, Male reproductive system, Spermatogenesis, Fertilization and implantation; Bilaminar and Trilaminar germ discs, Intraembryonic mesoderm, Folding of the embryo, Formation of the placenta, Circulation of the placenta, Foetal membrane, Twinning, Teratology, Evolution. Recent advances.

Genetic basis of congenital disorders, Structure of chromosome, Tissue culture and karyotyping, Abnormalities of Chromosomes, Chromosomal aberrations, abnormalities of genes, genetic counselling, Pedigree and Modes of inheritance. Prenatal diagnosis

3. UPPER & LOWER LIMBS [20 Marks]

Bones, Fascia, Venous and lymphatic drainage, Cutaneous innervation and myotomes (Motor innervation) of Upper limb; Surface anatomy and the structures in the Pectoral and scapular regions; Mammary gland with special emphasis to its lymphatic drainage; Blood vessels, nerves (Brachial plexus) and lymph nodes in the axilla and their clinical significance; Muscles, blood vessels and nerves of arm, forearm and hand; Cubital fossa, fascia and compartments of palm and their clinical significance; all joints of upper extremity.

Bones, Fascia, Venous and lymphatic drainage and their clinical significance, Cutaneous innervation and myotomes (Motor innervation) of Lower limb; Special emphasis to Posture and Gait; Structures in the gluteal region and their clinical significance; Structures in all three compartments of thigh and leg. Popliteal fossa; Muscles and neurovascular structures in the sole of foot; Arches of foot and their applied anatomy; All joints of lower extremity, Developments of limbs musculature & Skeleton

4. THORAX [10 Marks]

Skeleton, joints, neurovascular structures, muscles and movements of thoracic wall; thoracic apertures; Pleura, lungs and tracheobronchial tree and their surface marking and applied importance; Boundaries and contents of mediastinum and applied anatomy. Pericardium, Chambers and blood supply of the heart and their relation to the areas of auscultation. Development of Heart and its anomalies. Arch of Aorta, SVC, IVC, thoracic part of oesophagus, thoracic duct and azygos system of veins; Development of major blood vessels from the aortic arches and their associated anomalies. Development of respiratory system.

5. HEAD AND NECK [15 Marks]

Scalp; Face and its development; Pituitary gland, Cranial meninges and the dural venous sinuses; Eyelid and lacrimal apparatus; nerves and vasculature of orbit; Extraocular muscles of Eyeball; Parasympathetic ganglia, Muscles of mastication, T.M joint, Nasal cavity and Paranasal air sinuses. External, Middle and Internal ear. Cervical fascia, Pharynx, Larynx, Thyroid gland, its development and applied significance; Cranial nerves, sympathetic ganglia in the neck; Development of Brachial arches, face, palate, tongue, eye.

6. BRAIN [10 Marks]

Spinal cord- external features, blood supply and development. Medulla Oblongata, Superficial & Deep blood supply of the brain and their applied importance; Midbrain, Pons, Cerebellum; Ventricles of brain and subarachnoid cisterns; Sulci, gyri and functional areas of the cerebrum. White matter of cerebrum- Internal capsule; Basal nuclei, Optic pathway, Thalamus; Development of brain and Functional columns. Ascending and Descending tracts of spinal cord and brain stem.

7. ABDOMEN, PELVIS & PERINEUM [20 Marks]

Anterior abdominal wall- muscles, blood vessels and nerves. Incisions on the anterior abdominal wall, Rectus sheath and contents; Inguinal canal, Testis and spermatic cord; Peritoneum, its reflections and applied anatomy. Development of GIT- Rotation of midgut and its associated anomalies; Stomach, Duodenum, Colon, Pancreas, Spleen, Portal Vein, Liver & Gallbladder, Extrahepatic biliary apparatus; Diaphragm, its development and associated anomalies;

Uterus, Ovary, Prostate; Rectum and Anal canal and their applied importance; Pelvic floor, Pelvic vessels, nerves and lymph nodes; Development of Urogenital system; Kidney, Suprarenal gland, Ureters, Urinary bladder; Development of external genitalia. Ischiorectal fossa, Perineal pouches, Perineal body, Pudendal canal, Pudendal Nerve.

8. Systemic Histology, Techniques in Histology, Museum and embalming

techniques [05 Marks]

9. Radiological Anatomy and Newer Imaging Techniques [05 Marks]

NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper