

57. VETERINARY ANATOMY (FOR NET ONLY)

Unit 1: Gross Anatomy

Ox as a "Type" animal and structures of other domestic animals in comparison. Bones of fore and hind limbs, axial system viz. skull, vertebrae, ribs and sternum in domestic animals. Joints, their classification and important joints in ox. Myology in general, muscles of appendicular and axial system in ox. Heart, systemic and pulmonary circulation. Aorta and its important branches in thoracic and abdominal regions. Blood supply of fore and hind limbs. Venous drainage of fore and hind limbs, head, neck, thorax and abdomen and portal circulation in ox. Superficial lymph nodes of ox in relation to antemortem and postmortem examinations. Thymus and spleen in general. Cisterna chyli and major lymphatic ducts of head, neck, thorax and abdomen. Organs of digestive, respiratory, urogenital (in male and female) and nervous systems. Topographic location of organs in domestic animals in relation to their surgical sites and clinical examination. Endocrine glands-pituitary, adrenal, thyroid and parathyroid glands of ox. Organs of sense-eye, internal ear, integument and hoof. General principles of biomechanics during locomotion and weight bearing.

Unit 2

Study of various organs of digestive, respiratory and urogenital system in fowl.

Unit 3: Microanatomy

Definition of histology and preparation of histological slides. Microscope and microscopy. Light and ultrastructural picture of animal cell. Basic tissues of the body-epithelium, connective tissue, muscular and nervous tissues in general. Micro-anatomy of important organs of digestive system viz. tongue, tooth, oesophagus, stomach, intestine, liver and pancreas. Respiratory organs viz. nasal cavity, trachea and lungs. Urinary organs-kidney, ureter, urinary bladder and urethra. Genital organs of male- testis, epididymis, ductus deferens. Accessory sex glands in male -prostate, seminal vesicles and bulbo- urethral gland and penis. Genital system in female-ovary, oviduct, uterus, vagina, vulva and mammary glands. Sensory organs of smell, taste, vision, hearing and touch. Endocrine glands- pituitary, pineal, thyroid, parathyroid and adrenal glands. Lymph nodes, spleen, thymus and bursa (of Fabricius).

Unit 4: Developmental anatomy

Embryology and its scope in veterinary practice. Gametogenesis, fertilization, cleavage, gastrulation and establishment of three germinal layers. Intra and extra embryonic membranes of chick and mammals. Placentation in mammals. Morphogenesis and histogenesis of digestive, respiratory, urinary and genital organs, blood vascular and nervous systems in mammals and chicks. Development of eye, ear and endocrine glands.