

Pet Animal Section

Registration, filling up registration cards, history taking. Relating generic and trade names of drugs alongwith their doses, indications and contraindications to prescribed treatment regimens. Familiarization and practice of first aid procedures and emergency medicine. Practice of collection, labeling, packaging and evaluation of laboratory samples. Clinical examination techniques- palpation, percussion and auscultation, systematic examination of various systems, recording of clinical observations viz. temperature, respiration, pulse, cardiac sounds, cardiac function, pulmonary function, functional motility of digestive systems. Routes and techniques of administration of medicaments. Diagnosis and treatment of diseases. Collection of materials like urine, faeces, skin scraping, blood, milk and other body fluids for laboratory tests. Preparation of case records; follow-up records etc. Vaccination and other disease prevention and control programmes. Practice of pregnancy diagnosis, examination of cases of anoestrus, silent oestrus and conception failure. Rectal examination of genitalia, vaginal examination. Epidural and local anaesthesia for gynaecological cases. Resteraining and positioning techniques for examination, diagnosis and surgical treatment. Preparation of surgical packs, sterilization procedures for surgical instruments. Passing of stomach tube and gastric tube. Catheterization and urine collection. Familiarization with antiseptic dressing techniques. Topography anatomy of pet animals. Radiographic positioning and terminology.

The practical component will be dealt with internally. The examination for VCP shall be conducted twice a year i.e. first practical exam after completion of 50% syllabus and the second one, when the course is completed but the second exam shall comprise of entire syllabus. Annual professional examination shall be held after the completion of 100% course content in each subject.

The examination should comprise of following components:

- (i) Submission of 10 complete cases each of Surgery, Medicine, Gynaecology
- (ii) Case presentation
- (iii) Review of treatment of 5 cases
- (iv) Written Objective Questions (Surgery, Medicine, Gynaecology
- (v) and Lab diagnosis)
- (vi) Viva
- (xiv) **LIVESTOCK FARM COMPLEX**

LIVESTOCK FARM PRACTICES**(Third year)****Cr. Hr. 0+2**

Aim of Livestock farm practices is actual involvement of students in all aspects of animal rearing so that they can rear animals on their own. Hands on training of the students on the overall farm practices of livestock management including cleaning, feeding, watering, grooming, milking, routine health care, record keeping, sanitation, housing, fodder production, preparation of mineral mixture, cost economic of fodder production. Care of pregnant animals, management of parturition, care of neonatal and young stock. Management of broiler, layer farm and hatchery.

One full day per week comprising of six contact hours will be kept entirely for LFP where the students should be divided into small batches on rotational basis wherein they should be actually involved in different activities such as milking, feeding etc.

The practical component will be dealt with internally. The examination for LFC shall be conducted twice a year i.e. first practical exam after completion of 50% syllabus and the second one, when the course is completed but the second exam shall comprise of entire syllabus. Annual professional examination shall be held after the completion of 100% course content in each subject.

The examination should comprise of following components:

- (i) Day to day activities
- (ii) Record Book
- (iii) Written Objective Questions
- (iv) Viva Any other suitable component as per conditions
- (xv) **DEPARTMENT OF VETERINARY SURGERY AND RADIOLOGY**
VETERINARY SURGERY AND RADIOLOGY

Credit Hours:2+1**THEORY****UNIT-1(VETERINARY GENERAL SURGERY)**

Introduction: Historical perspective, Definitions, classification of surgery, tenets of Halsted. Pre-operative, intra-operative and post-operative considerations: History taking, physical examination, clinico-pathological testing, intra-operative and postoperative care.

Sterilization and disinfection: Definitions, surgical sterilization, various methods of sterilization (Heat, chemical and radiations etc.), disinfections.

Sutures: Definitions, suturing, factors influencing suturing, characteristics of an ideal suture material, types of suture material-absorbable and non-absorbable, surgical knots, various suture patterns-apposition, eversion, inversion and special.

Treatment of acute and chronic inflammation: Use of anti-inflammatory drugs and proteolytic enzymes. Haemostasis (physical and chemical methods, systemic haemostats, surgical diathermy)

Basic surgical affections: Definitions, classification, diagnosis and treatment of abscess, tumour, cyst, hernia, haematoma, necrosis, gangrene, burn and scald, frost bite and surgical affections of muscles, artery and vein, sinus and fistula.

Wounds: Definition, classification, examination and diagnosis, general principles for treatment of aseptic, contaminated and septic wounds, healing and factors affecting wound healing, complications of wounds and their remedies. Surgical infection; their prevention and management: Classification of infection, Introduction to biomaterials and stem cell therapy in wound management

Management of surgical shock. Principles of fluid therapy in surgical patients.

UNIT-2 (VETERINARY ANAESTHESIOLOGY)

Introduction: Development of anaesthesiology, Terminology, classification and indications. General considerations of anaesthesia: Factors affecting anaesthesia and selection of anaesthetic technique, factors modifying uptake, distribution and elimination, patient evaluation, categories of patients according to physical status, selection of anaesthetic agent and patient preparation. Pain and its management in animals Local and regional anaesthesia: Definitions, local anaesthetics, mechanism of action Premedication, properties and use of different preanaesthetics: Uses of premedication, ,

Anticholinergic, sedatives and tranquilizers (Phenothiazine derivatives, Benzodiazepines, Butyrophenones, Narcotic analgesics, Alpha-2 agonists, dosage chart of all the drugs.

General anaesthesia: Definitions, methods of induction of anaesthesia, Intravenous anaesthetics (Total intravenous anaesthesia), monitoring of anaesthesia.

Inhalation anaesthesia: Advantages of inhalant anaesthetics, types of inhalant anaesthetics their properties and effect on various systems, methods of administration of inhalant anaesthesia.

Dissociative anaesthesia: Definition, drugs, clinical application, properties and effect on various body systems.

Avian, wild, zoo, exotics and lab animal anaesthesia and capture myopathy

Anaesthetic emergencies and management, Toxicity, antidote and reversal agents.

UNIT-3 (VETERINARY DIAGNOSTIC IMAGING TECHNIQUES)

Introduction to Radiology-General terminology of radiology, Physical properties of X-Rays, Scope and uses of Radiology, Directional terms for veterinary radiology. Production of X-rays and factors influencing production of X-rays. Radiation hazards and safety measures- Scattered radiation, Biological effects of radiation, Direct and indirect effects, Early and late effects, Radiation sensitivity of different body cells, Radiation protection, General principles of radiation safety, Radiation monitoring devices, Requirement of an ideal radiographic section. The statutory requirements of radiology set-up as per Atomic Energy Regulatory Board of India (AERB). Production of quality diagnostic radiograph. Recording of image- Manual and digital processing of X-ray films, storage and retrieval system. Radiographic Quality and faults- Radiographic detail, density and contrast and factors affecting them, Radiographic faults, their possible causes and prevention. Contrast radiography- Definition, indications, contraindications and types of contrast radiography, Different contrast materials and their use, Techniques of some selected contrast radiography in animals (Barium swallow, Retrograde urography etc) Diagnostic ultrasonography- Principles, indications, techniques and artifacts of ultrasonography. Advanced diagnostic imaging tools- The brief introduction to the use and limits of some advanced imaging techniques, Interventional radiology - CAT scanning, MRI, etc

UNIT-4: (REGIONAL SURGERY-I)

Head and Neck: Affections of lips, cleft palate, tongue, cheek, and their treatment: General anatomical considerations, avulsion of lip, cleft lip ranula, neoplasm and traumatic injuries. Affections of teeth and jaws and their treatment: General anatomical considerations, Developmental abnormalities, dental tartar, periodontal disease, overgrown molars, fractures and luxations of jaw. Affections of nose, face, ear, head and horn and their treatment: General anatomical considerations.

Brachycephalic syndrome, Stenotic nostrils, nasal polyps, empyema of sinuses, fracture and avulsion of horn, horn cancer, aural haematoma, otitis. Affections of eye and their treatment: General anatomical considerations and examination of eye. Affections of eyelids and nictitating membrane and their treatment: entropion, ectropion, chalazion, sty, Cherry eye and traumatic injuries. Affections of lachrymal apparatus, eyeball and orbit and their treatment: occlusion of nasolacrimal duct, traumatic proptosis, panophthalmia, orbital neoplasms, glaucoma, eye worms. Affections of cornea, iris and lens and their treatment: corneal ulcers, corneal opacity, Kerato Conjunctivitis Sicca (KCS), prolapse of iris, corneal dermoid, corneal lacerations and perforations, cataract. Affections of guttural pouch, oesophagus and their treatment: General anatomical considerations. Empyema, tympanitis and Mycosis of guttural pouch, oesophageal diverticulum, megaesophagus, achalasia and choke. Affections of glands of head and neck and their treatment: General anatomical considerations. Salivary mucocele, sialoliths, salivary fistula Affections of neck and their treatment: General anatomical considerations. Yoke gall, yoke abscess, fistulous withers, poll evil, torticollis. Affections of larynx and Trachea: Tracheal collapse, stenosis, roaring in horses, dorsal entrapment of soft palate in horses and camels, emergency tracheotomy. Management of ocular emergencies. Tracheotomy

UNIT-5: (REGIONAL SURGERY-II)

Thorax and Abdomen: Thoracic affections: Surgical approaches, perforated wounds, pyothorax, pneumothorax, pneumocele, Diaphragmatic hernia and traumatic pericarditis in cattle. Abdominal affections: Surgical approach to the abdomen in different animal species. Common surgical affections of the stomach in dogs and their management: dilation and torsion of stomach, gastric ulcerations, foreign bodies in the stomach, pyloric stenosis. etc Surgical affections of the stomach in large animal and their management: Ruminal impaction, traumatic reticulitis, omasal and abomasal impaction and abomasal displacement. Surgical affections of small intestines and their management: Intestinal obstruction, intussusception and strangulation (volvulus). Techniques of intestinal anastomosis. Surgical affections of large intestine and their management: Caecal dilatation and torsion, rectal prolapse, rectal and perineal tear, recto-vaginal fistula. Surgical affections of anus and perineal region and their management: Atresia-ani, anal stenosis, anal sac impaction. Other surgical affections of abdomen and their management: Perforating wounds and fistulae of abdomen, umbilical hernia, ventral abdominal hernia, inguinal and scrotal hernia, perineal hernia. Urinary system: Urolithiasis and its management. Urolithiasis in small and large animals. Patent urachus, ectopic ureter. Surgical management of equine colic. Genital system: Surgical affections of male genital system and their management, prostatic enlargement hyperplasia or neoplasm, Phimosis, paraphimosis, preputial prolapse, penile amputation. Castration, vasectomy, scrotal ablation in large and small animals. Surgical affections of female genital system and their management: Canine transmissible venereal tumour. Ovariohysterectomy and caesarean section. Applications of rigid and flexible endoscopes in the management of surgical disorders. Integumentary system: Surgical affections of udder, teat and canine mammary neoplasms. Surgical affections of tail and tail docking Wildor zoo animal surgery(only awareness)

UNIT-6 (ORTHOPEDICS AND LAMENESS)

Body conformation of the horse in relation to lameness (trunk, fore limb and hind limb).

Lameness: Its definition classification and diagnosis. General methods of therapy for lameness. Body and limb conformation in relation to lameness in equine.

Equine lameness: Shoulder slip (sweeny), bicipital bursitis, omarthritis, capped elbow, radial paralysis, carpalis. bent knee, and knock- knee. Hygroma of knee, open knee, blemished knee. Fracture of carpal bone, fracture of accessory carpal, contraction of digital flexors. Splints, sore shin, wind puffs, sesamoiditis, Osstots, ringbone, quittor, side bone, Navicular disease, pyramidal disease. Laminitis, sand crack, seedy toe, fractures of third phalanx, pedal osteitis, and sole penetration. Canker, thrush and corn, Monday morning disease, cording up, myositis of psoas, Mac thrombosis, Crural paralysis, subluxation of sacroiliac joint rupture of round ligament trochantric bursitis. Upward fixation of patella, stringhalt, gonitis, chondromalacia of patella, rupture of tendoachilles, rupture of peroneus tertius, fibrotic myopathy and ossifying myopathy. Thoroughpin, bog spavin, spavin, curb, capped hock.

Canine lameness: Intervertebral disc diseases, elbow and hip dysplasia, rupture of cruciate ligament, elbow hygroma etc.; their management, Onychectomy.

Bovine lameness: Contusion of sole, ulceration of sole, septic laminitis, avulsion of hoof and subluxation of patella, interdigital fibroma, cyst, sand crack, and hoof deformities.

Fracture: Definitions, classification, fracture healing and complications.

Fracture: The preliminary assessment and management of fractures. Techniques of external immobilization of fractures.

Techniques of internal immobilization of fractures. Management of fracture complications

Luxations: Definition, signs, diagnosis. Management of common joint luxations in animals.

Spinal trauma, diagnosis and its management

Rehabilitation and physiotherapy of orthopaedic patients

PRACTICAL**UNIT-1(VETERINARY GENERAL SURGERY)**

Introduction to layout of operation theatre and surgical unit. Introduction of common surgical equipment and instruments. Suture materials, surgical knots and suture patterns. General examination of surgical patients. Preparation of surgical patients. Other operation theatre routines like sterilization, preparation of theatre, Surgeon and surgical pack. Bandaging and basic wound management Demonstration (or Audio visual aids) of surgery, control of haemorrhage and suturing

UNIT-2 (VETERINARY ANAESTHESIOLOGY)

Familiarization with anaesthetic apparatus, monitoring equipment and accessories. Methods of local infiltration analgesia (Linear ring block, inverted L block etc.) Regional nerve block demonstration and practice (Auriculopalpebral block, Peterson block or 4 point retrobulbar nerve block, Paravertebral, epidural etc.) Intravenous regional anaesthesia in cattle. Administration of general anaesthesia in small and large animals. (Demonstration and practice). Administration of inhalant anaesthesia (Demonstration). Monitoring of general anaesthesia. Management of anaesthetic emergencies, use of artificial respirator and analeptics. Visit to a wild animal facility or audio-visual aids or both.

UNIT-3 (VETERINARY DIAGNOSTIC IMAGING TECHNIQUES)

Familiarization with the operation of the x-ray unit. Formulation of X-ray exposure technique charts, Adoption of safety measures and film processing. Positioning and radiography of different parts of the body in small and large animals Handling, viewing and interpretation of radiograph. Familiarization with the film contrast, density and details, common radiographic artifacts. Radiographic pathology of the head, neck and thorax of large and small animals. Radiographic pathology of abdomen of large and small animals. Radiographic pathology of the bones and joints of large and small animals. Demonstration of contrast radiographic techniques in animals. Demonstration of ultrasonography in animals. Fluoroscopy or Image intensifier (familiarization).

UNIT-4: (REGIONAL SURGERY-I)

Demonstration or Audio visual aids: Amputation of horn and disbudding. Tooth rasping, dental scaling. Examination of ear (otoscopy). Examination of eye (General examination, Ophthalmoscopy, tonometry, fluorescein dye test, Schermer tear test, test for blindness). Operation for aural haematoma. Protection and bandage of eyes, tarsorrhaphy, third eyelid flap, flushing of nasolacrimal duct

UNIT-5: (REGIONAL SURGERY-II)

Demonstration or Audio visual aids-Castration in different species in clinical cases and under animal birth control programme in canine. Ovariohysterectomy in dogs and cats. Rumenotomy, Gastrotomy in dogs, Urethrotomy and urethrostomy. Cystotomy and cystorrhaphy. Enterotomy or Enterectomy. Management of teat and udder affections. Amputation of tail in different animals in clinical cases. Circumcision operation for prepuce and rectal prolapse. Thoracocentesis and abdominocentesis.

UNIT-6 (ORTHOPEDICS AND LAMENESS)

Demonstration or Audio visual aids-Familiarization with various orthopaedic instruments and implants. Basic orthopaedic and neurological examination in small and large animals. Nerve blocks in equine. Application of basic physiotherapy techniques in animals. Basic limb stabilization techniques and splinting techniques. Application of cast in small and large animals. Internal fixation techniques in animals. Medial patellar desmotomy in bovines. Examination of animals for soundness and preparation of soundness certificate.

ANNUAL EXAMINATION

PAPERS	UNITS	MAXIMUM MARKS	WEIGHTAGE
THEORY			
Paper-I	1, 2, 3 and 4	100	20
Paper-II	5 and 6	100	20
PRACTICAL			
Paper-I	1, 2, 3 and 4	60	20
Paper - II	5 and 6	60	20