SYLLABUS FOR RECRUITMENT TEST
FOR THE POST OF VETERINARY SURGEON

MILK AND MEAT HYGIENE, FOOD SAFETY AND PUBLIC HEALTH


{Office International des Epizootics (OIE), World Trade Organisation (WTO), Sanitary and Phytosanitary (SPS) and Codex Alimentarius}.

VETERINARY EPIDEMIOLOGY AND ZOOHOSES

Definition, history and socio-economic impact of zoonotic diseases. Classification of zoonoses and approaches to their management. New, emerging, re-emerging and occupational zoonoses. Role of domestic, wild, pet and laboratory animals and birds in transmission of zoonoses. Zoonotic pathogens as agents of bio-terrorism. Reservoirs, clinical manifestations in animals and humans, and the management of the following zoonoses: rabies, Japanese encephalitis, Kyasanur forest disease, influenza, anthrax, brucellosis, tuberculosis, leptospirosis, listeriosis, plague, rickettsiosis, chlamydiosis and dermatophytosis. Food borne zoonoses: salmonellosis, staphylococcosis, clostridial food poisoning, campylobacteriosis, helminthrosis, toxoplasmosis and sarcocystosis. Veterinary Public Health Administration.

ENVIRONMENT AND ENVIRONMENTAL HYGIENE


VETERINARY GYNAECOLOGY

reproductive hearth management. Clinical use of hormones in female infertility. Breeding management mismating, psuedopregnancy, transmissible venereal tumor-(TVT) in bitches

Induction of estrus, Synchronization of estrus, Follicular Dynamics, Ovulation, Superovulation, and Embryo Transfer Technology. Immune-modulation for enhancement of fecundity

VETERINARY OBSTETRICS


Animal birth control- ovariohysterectomy and non surgical interventions

GENERAL VETERINARY SURGERY, ANESTHESIOLOGY AND DIAGNOSTIC IMAGING

General Surgery

Anaesthesiology

Preanaesthetic considerations and preanaesthetics. Anaesthesia, local analgesia /anaesthesia, General anaesthesia, anaesthetic agents (like barbiturates, dissociative agents). Inhalation anaesthesia and agents, maintenance and monitoring of general anaesthesia. Anaesthetic emergencies and their management Only awareness of neuroleptanalgesia, electroanaesthesia, acupuncture, hypothermia, muscle relaxants. Post operative pain management General principles of chemical restraint of wild / zoo animals and anaesthesia of lab animals.

Diagnostic Imaging

Production and properties of X-rays. Factors influencing production of X-ray


REGIONAL VETERINARY SURGERY

Head and Neck


**Thorax and Abdomen**


**VETERINARY ORTHOPAEDICS AND LAMENESS**

fractures in small and large animals. Complications of fracture healing. Affections of tendon, 75 tendon sheath, bursa and ligaments. Principles of physiotherapy, classification, scope and limitations

VETERINARY CLINICAL MEDICINE-I
(GENERAL & SYSTEMIC)


VETERINARY PREVENTIVE MEDICINE-I
(BACTERIAL, FUNGAL& RICKETTSIAL DISEASES)

Clinical manifestation, diagnosis, prevention and control of infectious diseases, namely mastitis, haemorrhagic septicemia, brucellosis, tuberculosis, Jobne’s disease, black quarter, tetanus, listeriosis, leptospirosis, campylobacteriosis, actinomycosis, actinobacillosis, enterotoxaemia, glands, strangles, ulcerative lymphangitis, colibacillosis, fowl typhoid, putiorum disease, fowl cholera, avian mycoplasmosis, spirochaetosis, salmonellosis, swine erysipelas. Other important bacterial diseases of regional importance (e.g. contagious caprine pleuropneumonia, contagious bovine pleuropneumonia etc.). Bacterial diseases of bio terrorism Instance - anthrax, botulism etc Chlamydi osis, Q fever, anaplasmosis, Dermatophilosis, aspergillosis (brooders pneumonia), candidiasis, histoplasmosis, sporotrichosis, coccidiomycosis, mycotoxicosis, etc
VETERINARY CLINICAL MEDICINE -II
(METABOLIC & DEFICIENCY DISEASES)


VETERINARY PREVENTIVE MEDICINE-II
(VIRAL & PARASITIC DISEASES)

ANIMAL WELFARE, ETHICS AND JURISPRUDENCE


ZOO/WILD ANIMAL BREEDING, NUTRITION, MANAGEMENT AND HEALTH CARE

Taxonomy of various genera of wild/zoo animals of India along with their descriptions. Ethology of wild life species. Basic principles of habitat and housing of various classes of wild and zoo animals. Population dynamics of wild animals, effective population size of wild animals in captivity/zoo/natural habitats. Planned breeding of wild animals. Controlled breeding and assisted reproduction. Breeding for conservation of wild animals. Feeding habits, feeds and feeding schedules of zoo animals. Nutrient requirements of wild animals, Diet formulation and feeding of various age groups, sick and geriatric animals. Restrain, capture, handling, physical examination and transport of wild and zoo animals. Principles of anaesthesia, anaesthetics, chemicals of restraining, common surgical Interventions. Capture myopathy. Principles of zoo hygiene, public health problems arising from zoos. Prevention, control and treatment of infectious,
parasitic, nutritional and metabolic diseases in zoo and wild animals. Acts and Rules related to Zoo and wild animals. National 79 and international organisations and institutions interlinked to wild and zoo animals - rote and functioning.

PET/ ANIMAL BREEDING, MANAGEMENT, NUTRITION AND HEALTH CARE

Breeds of dogs- international pedigree breeds and those commonly seen in India. Pedigree sheet and major breed traits. Detection of oestrus and Breeding of dogs. Selecting a breed to keep, selection of a pup.


Livestock in India - association of livestock to Indian society during vedic, medieval and modern era. Demographic distribution of livestock and role in economy. Animal holding and land holding patterns in different agro-ecologies.


General principles affecting the design and construction of building for housing for various livestock species. Selection of site. Arrangements of the building with special reference to Indian conditions.

Utilisation of local materials. Building materials used for construction of wall, roof and floor of animal houses, their characteristics, merits and demerits.


quality and confirmation of body parts of cattle, buffalo, sheep and goat Culling of animals. Preparation of animals for show.


FODDER PRODUCTION AND GRASSLAND MANAGEMENT

Importance of grasslands and fodders in-livestock production. Agronomical practices for production of leguminous and non-leguminous fodders in different seasons. Soil and water conservation and irrigation drainage for fodder production. Farm, power and agro-energy. Farm machinery and equipment Harvesting and post harvest techniques for fodder preservation. Storage of feeds and fodders. Scarcity fodders. Feed and fodder management for individual animals. Fodder production for small units through inter cropping or back yard cultivation. Recycling of animals washings and wastes in fodder production.

AVIAN PRODUCTION MANAGEMENT

Indian Poultry industry-brief outline of the different segments-poultry statistics.

Classification of poultry, common breeds of poultry including duck, quail, turkey & guinea fowl and their descriptions. Description of indigenous fowls.

Reproduction in fowl, male and female reproduction systems, formation of eggs, structure of eggs. Important economic traits of poultry, egg production, egg weight egg quality, growth, feed consumption and feed efficiency, fertility and hatchability, plumage characteristics and comb types. Scavenging system of management raising of chicks, scavenger feed base of village. Low input technology; backyard and semi intensive unit of various sizes; their description, management and economic achievements.

New colored feathered birds developed in public and private sectors for meat and egg production for rural poultry; their acceptability and assimilation in rural eco-system. Mixed farming and poultry raising. Concept of self-local market unit

Brooding and rearing practices used for chicken, duck, quail, turkey and guinea fowl. Economic production of chicken and other classes of poultry.

BIO-STATISTICS AND COMPUTER APPLICATION

A. Basic Statistics:


B. Experimental designs:

Completely Randomized Design (CRD.) and Randomized Block Design (R,B.D). Analysis of variance.

C. Computer application:


PRINCIPLES OF ANIMAL GENETICS AND POPULATION GENETICS

History of Genetics. Chromosome numbers and types in livestock and poultry. Mitosis, Meiosis and gametogenesis. Overview of Mendelian principles; Modified Mendelian inheritance: gene interaction; multiple alleles; lethals; sex-linked, sex limited and sex influenced traits; linkage and crossing over, Mutation, Chromosomal aberrations; Cytogenetics, Extra-chromosomal inheritance. Gene concept - classical and molecular.

Population genetics: Genetic structure of population: Gene and genotypic frequency: Hardy - Weinberg law and its application; Forces (eg Mutation, migration, selection and drift) changing gene and genotypic frequencies.

Quantitative genetics: Nature and properties; Values and means. Components of phenotypic and genotypic variance; Concept of genotype and environment interaction, Resemblance between relatives; Heritability, repeatability, genetic and phenotypic correlations.
LIVESTOCK AND POULTRY BREEDING

History of Animal Breeding; Classification of breeds; Economic characters of livestock and poultry and their importance; Breeding/Selection techniques for optimal production. Selection: Response to selection and factors affecting it; Bases of selection individual, pedigree, family, sib, progeny and combined; Indirect selection; Multitrait selection.

Classification of mating systems; Inbreeding and out breeding-genetic and phenotypic consequences viz., inbreeding depression and heterosis: Systems of utilization of heterosis; Selection for combining ability; Breeding methods for the improvement of dairy cattle and buffaloes {crossbreeding, sire evaluation, field progeny testing, open nucleus breeding system (ONBS)}, sheep, goat, swine and poultry; Breed development; Conservation of germplasm, Current livestock and poultry breeding programmes in the state and country.

PRINCIPLES OF ANIMAL NUTRITION AND FEED TECHNOLOGY

APPLIED NUTRITION-I (RUMINANTS)


MILK AND MILK PRODUCTS TECHNOLOGY


MEAT SCIENCE