1.1 ANIMAL BREEDING AND GENETICS

1.2 ANIMAL NUTRITION

1.3 LIVESTOCK PRODUCTION AND MANAGEMENT

1.4 LIVESTOCK PRODUCTS TECHNOLOGY

1.5 VETERINARY ANATOMY
Topographic anatomy and gross anatomical structures involved in the clinical examination and surgical interferences of importance in large and small animals. Radiographic anatomy of various regions of domestic animals.

1.6 VETERINARY PHYSIOLOGY AND BIOCHEMISTRY

1.7 VETERINARY MICROBIOLOGY

1.8 VETERINARY PHARMACOLOGY AND TOXICOLOGY
Anticonvulsants, opioid agonists and antagonists, antipyretics, steroids and non-steroidal anti-inflammatory drugs. Commonly used emollients, demulcents, stomachics, prokinetics, antiemetics, antiulcer, carminatives, antizymotics, purgatives, antidiarrhoeals, antihypertensives, diuretics, urinary acidifiers, urinary alkalizers, ecblotics, cardiac glycosides, vasodilators, coagulants, anticoagulants, antihistaminics, expectorants, mucolytics, antitusives drugs. General approaches to diagnosis and treatment of poisoning. Clinical signs, diagnosis and treatment of toxicities caused by commonly used organophosphates, carbamates, chlorinated hydrocarbons, pyrethroids, herbicides, fungicides, rodenticides, arsenic, lead, fluoride, nitrates,

1.9 VETERINARY PARASITOLOGY
Classification (names only) of common parasites and parasitic diseases of domestic animals in Punjab. Common diagnostic techniques for different parasitic diseases. Chemoprophylaxis against parasites. Acaricide resistance.

1.10 VETERINARY PATHOLOGY

1.11 VETERINARY PUBLIC HEALTH
Sources of bacterial contamination of raw milk and method of control. Clean milk production; sources of contamination during collection, transport and processing of milk and methods of control. Milk borne diseases and methods of control. Toxic residues in milk and their health hazards. General principles and elements of meat inspection. Methods of slaughter. Conditions detected at meat inspection and their judgement; characteristics of meats of different food animals; composition, rigor mortis. Differentiation of meat of different food animals. Inspection of poultry, eggs, fish and game animals. Meat borne diseases and methods of control. Examination of lymph nodes and their importance in meat inspection. Role of livestock, pets, various wild and cold blooded animals in transmission of zoonotic diseases. Study of the important zoonotic diseases of the region. Methods of prevention, control and eradication of zoonotic diseases, Method of prevention and control of air and water borne diseases of animals. Stray animal control, fallen animals and environment: radiation, drugs, etc. as source of pollution.

1.12 VETERINARY AND ANIMAL HUSBANDRY EXTENSION
Steps of extension teaching. Classification of extension teaching methods, their selection and use. Client dealing: Communication with rural and urban public for data collection, history taking, follow up, appraisal on prognosis, announcing death of animal to the owner, etc. Various kinds of farming e.g. large and small scale farming, mixed farming, co-operative and collective farming. Economic principles underlying co-operative societies, cooperative milk activities in India. Animal Husbandry planning and programmes, Animal Husbandry administration, Key village scheme, ICDP, Gosadan/Gosala, Panchayati Raj, Integrated Rural Development Programme in Animal Husbandry. Calculation of economics of livestock and poultry farming to know the profitability of the enterprise.
1.13 ANIMAL REPRODUCTION, GYNAECOLOGY AND OBSTETRICS


1.14 VETERINARY MEDICINE

Etiology, epidemiology, pathogenesis, clinical symptoms, clinical pathology, diagnosis and treatment, prevention and control of the following diseases of cattle, buffaloes, equine, sheep, goat, pigs and pet animals: (A) General systemic states-hyperthermia, hypothermia, fever, septicemia, toxemia, shock and dehydration; (B) Diseases of (i) digestive system with special reference to rumen dysfunction and diseases of stomach in ruminants and simple stomach animals; (ii) peritoneum, liver and pancreas; (iii) respiratory system; (iv) cardiovascular system including blood and blood forming organs; (v) urinary system; (vi) nervous system; (vii) skin; (viii) musculo-skeletal system; (ix) eye; (x) ear; (xi) neonates: (C) Common neoplasms. Etiology, epidemiology, pathogenesis, clinical symptoms, clinical biochemistry, clinical pathology, diagnosis, treatment, prevention and control of : (A) Metabolic diseases – Milk fever; acute parturient hypocalcaemia in goats, sows and bitches; lactation tetany in mares; downer cow syndrome; ketosis; hypomagnesaemia; nutritional haemoglobinuria in cattle and buffalo; osteodystrophia fibrosa; azoturia in equines; hypothyroidism and diabetes in dogs. (B) Diseases caused due to deficiency of iron, copper, cobalt, zinc, selenium, manganese, calcium, phosphorus, magnesium, vitamins A, B complex, C, D, E and K in domestic animals. Legal duties of veterinarians. Evidence procedure in court Code of conduct and ethics for

1.15 VETERINARY SURGERY AND RADIOLOGY
