

## **Paper – II: Introductory Veterinary Physiology and Biochemistry**

### **Semester I**

**Name of the Course: Introductory Veterinary Physiology and Biochemistry -I**

**Course No. AHD-121; Cr. Hrs. 3 (2+1)**

#### **Theory**

1. General Physiology and Biochemistry of muscles i.e. smooth, cardiac, voluntary striated muscles.
2. General Physiology and Biochemistry of body fluids: Formation of blood cells, haemopoiesis, plasma, serum, blood pH, blood clot formation, various types of blood cells, lymph, cerebrospinal fluid, synovial fluid, serum, macrophages and immunity.
3. General Physiology and Biochemistry of digestive system – Chemical structure of food viz. carbohydrate, fat, protein, minerals, vitamins, biochemical agents etc. Prehension, mastication, swallowing, gastric movements, physiology of small and large intestine, digestion in ruminants and non-ruminants and their comparative study, various enzymes used during digestion, absorption of feed ingredients, metabolism of protein, carbohydrate and fat. Digestive glands e.g. salivary glands, gall bladder, pancreas and their functions.
4. General Physiology and Biochemistry of respiratory system – Mechanism of respiration, respiratory action, dead space, artificial respiration, exchange of gases etc

#### **Practical**

1. Haematology laboratory : an introduction
2. Laboratory glass ware, equipments, microscope etc. : Basic knowledge
3. Collection of blood samples from various animals and birds
4. Anticoagulants
5. Separation of serum and plasma
6. Preservation of serum and plasma
7. Introductory study of blood cells
8. An Introduction to basic techniques : Enumeration of erythrocytes and leucocytes, Determination of PCV, ESR, Differential leukocyte count (DLC), Haemoglobin.
9. Study of digestive system of various animals using charts and models
10. Demonstration of collection of rumen liquor
11. Study of respiratory system of various animals using charts and models
12. Study of various types of muscles using chart and models