

## PRACTICAL COURSES BSP 506 ANIMAL PHYSIOLOGY LAB

### Course Outcomes:

After successful completion of the course, students will be able to:

- CO 1. Perform experiments to estimate enzyme activity and understand factors affecting enzyme activity
- CO 2. Perform experiments on hormonal control of reproductive biology.
- CO 3. Perform experiments in muscle physiology and osmoregulation.
- CO 4. Conduct qualitative tests for excretory products and demonstrate active transport

#### 1. Gastrointestinal function–

- 1.1. Factors affecting enzyme activities in digestion of foodstuffs.
- 1.2 Quantitative estimation of Enzyme (amylase) activity.

#### 2. Neuroendocrinology–

- 2.1 Effect of hormones on blood glucose in rats.
- 2.2 Study of estrous cycle in mice
- 2.3 Study of sperm count, sperm morphology and sperm motility

#### 3. Muscle Physiology-

- 3.1 Histochemical detection of SDH activity in red and white muscle fibres.

#### 4. Osmoregulation-

- 4.1 Estimation of Fluid balance in an animal.
- 4.2 Osmotic relationship in animals at the level of cell as well as entire organism.

#### 5. Excretion-

- 5.1 Qualitative tests for excretory products.
- 5.2 Demonstration of active transport.

## BSP507 PLANT PHYSIOLOGY LAB

### Course Outcomes:

After successful completion of the course, students will be able to:

- CO 1. Realize the importance each nutrient in plant growth through experimentation and observation.
- CO 2. Observe mineral deficiency symptoms in plants.
- CO 3. Know how to perform the tests for understanding water relations.
- CO 4. Understand the photosynthesis by conducting some allied experiments.
- CO 5. Understand the role of growth hormones in plants.

#### 1. Plant nutrition-

- 1.1 Observation of mineral deficiency symptoms in plants.

#### 2. Water relations-

- 2.1 Experiments to demonstrate the diffusion pressure deficit in plant cell.
- 2.2 Determination of stomatal index, stomatal frequency and measurement of stomatal aperture.
- 2.3 Determination of water potential

#### 3. Photosynthesis -

- 3.1 Separation and estimation of chloroplast pigments.
- 3.2 Demonstration of Kranz anatomy

#### 4. Growth hormones and their regulation-

- 4.1 Experiments to demonstrate the effect of hormones on shoot apex.

#### 5. Plant pathology

- 5.1 Pathogens in crop plants