

BACHELOR OF SCIENCE in ZOOLOGY (HONS)
SEMESTER – V

Paper Code: ZOO-507P

100 marks

ZOO-507P: Practical on Cell Biology and Genetics, Evolution, Adaptation, Ethology, Biotechnology and Bioinstrumentation.

Cell Biology and Genetics 30 marks

Squash preparation of onion root tip for the study of mitosis Temporary and permanent squash preparation of the grasshopper testis for the study of meiosis. Temporary squash preparation of the salivary gland chromosomes of *Drosophila* and *Chironomus*. Study of permanent slides showing autosomes and sex chromosomes of a grasshopper and a mammal. Karyotyping of chromosomes. Demonstration of Sex Chromatin (Barr body) Demonstration of mitochondria by supra vital staining (Janus green)

Adaptation 10 marks

Study of mimicry in insects: Stick insect, leaf insect, moth, cicada, sea horse, flat fish, remora, flying lizard, bat etc.

Ethology 10 marks

Tagging (paper/aluminium) of animals and recapture to study patterns of migration.

Study of different types of nests of animals. Study of Parental Care.

Biotechnology 10 marks

Demonstration of alcohol fermentation using yeast. Demonstration of soyabean fermentation using starter culture Demonstration of curd making using starter culture

Bioinstrumentation 10 marks

Preparation of standard curve of amino acid and protein (bovine serum albumin). Measurement of cell/spore size using micrometer. Demonstration of oil emulsion techniques in microscopy. Separation of tissue extract using centrifuge. Demonstration of electrophoresis-paper/gel

Practical Records 5 marks

Slide Submission: Mitosis, Meiosis and Salivary Gland Chromosomes 10 marks

Viva Voce 15 marks
