

DEPARTMENT OF ZOOLOGY

II BSC ZOOLOGY

BZO31 – CELL AND MOLECULAR BIOLOGY

SYLLABUS

UNIT I	History of Cell and Molecular Biology – Principles of Microscopes – light and Electron, Cytological techniques – cell fractionation, Homogenization, Centrifugation, Isolation of Sub – cellular components, Biochemical techniques – Electrophoresis and their applications. Cell culture techniques and applications
UNIT II	Cell – Cell theory, Ultra Structure of animal cell – Structure, composition and functions – Cell components – Plasma membrane – Endoplasmic reticulum, Ribosomes, Golgi Complex, Lysosomes, Glyoxisomes, Peroxisomes, Centrioles and Mitochondria
UNIT III	Cytoplasm – Physical, chemical and Biological properties, Nucleus – Ultrastructure, Composition and Function – Chromosomes – Giant Chromosomes (Polytene and Lamp brush Chromosomes).