**PBO 3002: MOLECULAR BIOLOGY AND BIOTECHNOLOGY**

## Molecular biology Practicals

1. Models / Charts of DNA and RNA and its types.
2. Chart of Replication of DNA.
3. Charts of Transcription and Translation, RNA polymerases, regulation of transcription in prokaryotes and eukaryotes.
4. Models / Charts of Genetic code.
5. Charts of mutation wobble hypothesis, new genetic codes, overlapping and split genes.
6. Standard curve of DNA.
7. Isolation of plant DNA and its quantitation by spectrophotometric method.
8. Standard curve of RNA.
9. Isolation of plant RNA and its quantitation by spectrophotometric method.
10. Method of induction of polyploidy in onion root tip.
11. Study of various stages of cell divisions (Mitosis/Meiosis) in Plant cells.

## Biotechnology Practicals

1. Models / Charts of DNA sequencing method, PCR, DNA finger printing, terminator technology, hybridoma technology, etc and topics covered in theory syllabus.
2. Plant tissue culture: Embryo culture, bud culture and pollen culture