

## **ACHARYA NAGARJUNA UNIVERSITY - UG SYLLABUS**

**Group:** B.Sc    **Subject:** ANIMAL BIOTECHNOLOGY LAB    **Year:** III

**Sem:** V

### **List of Experiments**

#### **Any SIX of the following:**

1. Maintenance and storage of E.coli DH5 alpha cells.
2. Isolation of Plasmid DNA from E.coli
3. Preparation of genomic DNA from E. coli/animals/ human.
4. DNA quantification using agarose gel electrophoresis (by using lambda DNA as standard).
5. Restriction digestion of lambda ( $\lambda$ ) DNA using EcoR1 and Hind III.
6. Preparation for insertion and vector for ligation.
7. Performance of ligation reaction using T4 DNA ligase.
8. Preparation of competent cells
9. Transformation of E. coli with plasmid DNA using CaCl<sub>2</sub>,
10. Selection of transformants on X-gal and IPTG
11. Techniques: Western Blot, Southern Hybridization, DNA Fingerprinting
12. Interpretation of sequencing gel electropherograms
13. Amplification of DNA by PCR
14. Packing and sterilization of glass and plastic wares for cell culture.
15. Preparation of culture media.