

## VIROLOGY AND GENETIC ENGINEERING

Semester	Subject code	Category	Lecture		Theory		Practical		Credits
			Total hrs	Hrs/ week	Total hrs	Hrs/ week	Total hrs	Hrs/ week	
I	21CPMB23	Practical III	0	0	0	0	60	4	5

### Genetic Engineering

1. Estimation of DNA by Diphenyl amine method
2. Estimation of RNA by Orcinol method
3. Isolation and quantification of genomic DNA
4. Isolation and quantification of plasmid DNA
5. Restriction digestion - single or double digestion of given nucleic acid.
6. Ligation technique.
7. Blue white screening technique
8. Gradient plate technique
9. Western blotting
10. PCR (DEMO)

### Medical Virology

1. Isolation and characterization of Bacteriophage from Natural resources – 2. Phage titration – T4 or Lamda or M 13 – Determination of lysogeny using lamda phage or Staphylococcal indicator systems.
3. Staining of some viral inclusion bodies such as, (i) Rabies – Negri bodies, (ii) CPE stained smears.
4. Viral cultivation methods (i) Egg inoculation (ii) Animal tissue culture (Demo) (iii) Chick embryo fibroblast culture (Demo)
5. Serological tests – Haemagglutination and, Haemagglutination inhibition tests, study of virus infected plant samples