

M.Sc.(Microbiology) CBCS Pattern Semester-II  
**PSMBT-105 - Paper-I : Advance Techniques in Microbiology**

P. Pages : 1



GUG/W/23/11216

Time : Three Hours

Max. Marks : 80

Notes : 1. All questions are compulsory and carry equal marks.

1. Describe CD/ORD and light scattering technique to determine the size, shape and molecular weight of macromolecules. **16**
- OR**
- Describe the following methods to determine molecular weight of macromolecules.
- a) Diffusion sedimentation. **8**
- b) Centrifugation. **8**
2. Describe the principle, working mechanism and applications of SDS- PAGE. **16**
- OR**
- Write a note on.
- a) Capillary electrophoresis. **8**
- b) Two- dimensional gel electrophoresis. **8**
3. Describe the construction and working mechanism of SEM. **16**
- OR**
- Write working mechanism of.
- a) Fluorescent microscopy. **8**
- b) Confocal microscopy. **8**
4. Describe the working mechanism and applications of NMR. **16**
- OR**
- Write in brief.
- a) Western Blotting technique. **8**
- b) Radio immune assay. **8**
5. Write an account on.
- a) Light scattering technique for determination of macromolecules. **4**
- b) Immuno electrophoresis. **4**
- c) Cryo electron microscopy. **4**
- d) Site- directed mutagenesis. **4**

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