

Sr.No.14094

Exam Code: 210004

Subject Code: 4579

M.Sc. Botany - 4th Semester

(2720)

Paper - BOTC-624

Analytical Techniques

Time allowed: 2 hrs.

Max. Marks: 50

Note: Attempt any four questions. All questions are of equal marks.

1. Explain in detail Principle and application of the following microscopes: -
 - (i) Scanning Electron microscope
 - (ii) Phase contrast microscope
2. Describe the following:
 - (i) Fixation and Staining
 - (ii) Principle of Flow Cytometry
3. State applications of
 - (i) Ion exchange chromatography
 - (ii) Thin layer chromatography
 - (iii) Gas chromatography
 - (iv) High pressure liquid chromatography
4. Write short note: -
 - (i) Electrophoresis
 - (ii) Ultra-centrifugation
5. Write in detail principle of NMR and ESR spectroscopy.
6. Discuss the following:
 - (i) X-ray diffraction
 - (ii) Atomic absorption spectroscopy
7. State difference between Southern and Northern blotting? Also mention applications of these techniques?
8. Write a short note on following:
 - (i) Polymerase Chain reaction
 - (ii) Nucleic acid hybridization and Cot curves.

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