Subject Code : P8BO14

BIOINSTRUMENTATION AND BIOLOGICAL TECHNIQUES

Unit-I

Microscopy - Principles and application of Light - Dark field - Phase contrast - Fluorescence - Polarization - Scanning and Transmission Electron Microscopy

Unit-II

pH meter - Centrifugation - Clinical, High speed, Micro and Ultra centrifuges - Colorimetry - UV visible - Spectrophotometer - Photometry - Flame photometer - Atomic Absorption Spectrophotometer, NMR, MASS.

Unit-III

Chromatography - Principles and applications of partition - adsorption - Ion Exchange - Affinity - Gel filtration - GLC, HPLC, GCMS.

Unit-IV

Radioactive isotopes - Half-life of isotopes - Tracer Techniques - Autoradiography - Counting of radioactivity - Scientillation Counter - GM counter - Electrophoresis - SDS PAGE - Agarose.

Unit-V

Fixation of plant materials: Fixation - Fixative - Dehydration - Clearing reagents - Embedding with wax - resins - sectioning. Stains and staining mechanisms - Natural and synthetic stains - Mountants. Microtome - rotary, wood and cryo types.

References

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Note: **No Practical for this paper.**