

MODEL QUESTION PAPER

MSC I SEM

BIOTECHNOLOGY

FOURTH PAPER

BIOINSTRUMENTATION

TIME: 3 HRS

MAXIMUM MARKS: 85

MINIMUM MARKS: 29

Note: The question paper consists of two sections: A and B. attempt all the questions according to the given instructions.

Section A

Short Answer Type Questions

Note: Attempt all questions. Each question carries five marks (5 X 5 = 25)

Q1. Write a short note on UV Visible Spectrophotometry

Or

Write applications of IR Spectroscopy

Q2. Write comments on paper chromatography.

Or

Write short note on 2D gel electrophoresis.

Q3. What is X ray crystallography.

Or

Explain instrumentation of NMR.

Q4. Describe surface plasma resonance methods.

Or

Define principle and applications of flow cytometry.

Q5. Write a brief note on autoradiography.

Or

Describe phase contrast microscopy.

Section B

Long Answer Type Questions

Note: Attempt all questions. Each question carries twelve marks (5 X 12 = 60)

Q6. Give a detail note on centrifugation with its principle and types.

Or

Describe fluorescence spectroscopy, with principle, instrumentation and applications.

Q7. Explain principle and instrumentation of atomic adsorption spectrophotometer

Or

What is chromatography? Explain its types in detail.

Q8. Explain circular dichroism spectrophotometry, with its instrumentation and applications.

Or

Explain ESR spectrometer in detail.

Q9. Define Mass spectrometry with principle and components.

Or

What is mass analyzer? Explain in detail.

Q10. What is radioactivity? Describe its principle, detection and measurement of isotopes.

Or

Write principle and applications of electron microscope.