

[SPDBT-103]
M.Sc. DEGREE EXAMINATION

Biotechnology
I YEAR

BIOCHEMICAL TECHNIQUES AND BIostatISTICS

(Effective from the admitted batch 2009-10)

Time: 3 Hours

Max.Marks: 70

Instructions: All parts of the unit must be answered in one place only.
Figures in the right hand margin indicate marks allotted.

Answer one question from each unit.
Each question carried 14 marks:

BLOCK-I

1. a) Write the principle, method and applications of TLC. What are the advantages of TLC over paper chromatography? 14

OR

- b) i) Write the principle and applications of Ion exchange chromatography 7
ii) Explain Affinity chromatography and its applications 7

BLOCK-II

2. a) Describe the principle, method and applications of Agarose gel electrophoresis 14

OR

- b) i) How do you determine the molecular weight of proteins by SDS PAGE? 7
ii) Write the principle and applications of iso-electric focusing 7

BLOCK-III

4. a) Describe the principle of the technique and methodology used for the separation of sub cellular organelles 14

OR

- b) i) Write the principle and applications of CD spectroscopy 7
ii) Explain X-ray diffraction and its applications 7

BLOCK-IV

5. a) Describe the different types of radioactive emissions and their detection and measurement methods 14

OR

- b) i) Describe the principle and applications of oxygen electrode 7
ii) What are Biosensors? Write their design and uses 7

BLOCK-V

6. a) Describe Chi-Square Test and its use in the analysis of biological data with a suitable example 14

OR

- b) i) Explain standard error of Mean and its significance 7
ii) Describe Median and Mode 7

[01/IY/210]