

CS/2051

9711/MH

(6<sup>th</sup> Semester)

**C-13-BIO-ANALYTICAL TOOLS - CODE: BHB28**

**Time Allowed 3 Hours**

**Max. Marks: 74**

**NOTE: Attempt any two questions from each Section A and Section B respectively. Questions of Section A and B each carries 11 marks. Section C is compulsory**

**SECTION A**

- Q1 Give Principle of Florescence microscopy Draw a well labelled diagram and write down its applications.
- Q2. With the help of ray diagram explain SEM and discuss its applications in detail.
- Q 3 Explain different parts of monochromator used in UV/Vis/IR spectroscopy .
- Q4 Write a note on cell fractionation techniques and elaborates its applications.

**SECTION B**

- Q 5 Discuss the principle and applications of affinity and gas exchange chromatography .
- Q6 Write down steps followed in thin layer chromatography along with its applications.
- Q7.Explain the principle of PFGE and Agrose gel electrophoresis. Describe the applications of any of the one.
- Q8 Diagrammatically explain western blotting technique Give detailed procedure of SDS PAGE.

**SECTION C**

- Q Briefly discuss the following;
- Emission spectroscopy
  - Chemiluminescence
  - Principle of Colorimeter
  - Biosensor
  - Principle of NATIVE PAGE
  - Working of HPLC
  - Rate zonal centrifugation
  - Technique to isolate subcellular organelles
  - Types of paper chromatography
  - Principle of gas chromatography
  - Gel Filtration Technique
  - Immuno - electrophoresis
  - Properties of polyacrylamide gel
  - Applications of Nanotechnology
  - What is difference between absorption and emission spectra