Code: R7222303

**R07** 

## B.Tech II Year II Semester (R07) Supplementary Examinations, April/May 2013

## **INSTRUMENTAL METHODS OF ANALYSIS**

(Biotechnology)

Time: 3 hours Max. Marks: 80

> Answer any FIVE questions All questions carry equal marks

- (a) Describe various analytic methods available for biochemical analysis. 1
  - (b) Classify various instrumental methods used for analysis.
- 2 Write about the instrumentation, working principle, light source magnification of bright field microscope.
- 3 Describe the principle of sedimentation. What is various sedimentation techniques used in biochemical analysis?
- (a) What is electromagnetic radiation? Classify electromagnetic radiation stating their 4 application.
  - (b) State and explain Beer-Lambert's law.
- 5 Discuss principle, instrumentation, working and applications of infrared spectrometer.
- 6 Discuss principle, instrumentation, working and application of pH measurement.
- 7 Describe in detail about principle, working and application of Gel-Permeation chromatography.
- (a) Describe about interaction of nuclear radiation with matter. 8
  - (b) Write the theory behind NMR spectroscopy. Draw a schematic diagram of NMR spectroscopy.

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