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(20516) Roll No. .....

B. Sc.(Biotech.)-I Year

NS-3460

B. Sc. (Biotech.)Examination, May 2016

Instrumentation and Bioanalytical Techniques

(B-106)

(New)

Time : Three Hours] *[Maximum Marks : 50*

Note : Answer any *Five* questions. Each question carries 10 marks.

1. Write short notes on any two of the following : 5×2=10
   (a) Beer and Lambert's law
   (b) Autoradiography
   (c) Differential centrifugation.

2. Describe the different parts of electron microscope. What is the difference between electron microscope and optical microscope ? 10

3. Describe the procedure and application of ion-exchange chromatography. 10

4. Comment on any two of the following : 5×2=10
   (a) Phase contrast microscope
   (b) Techniques for detection and measurement of radioactivity
   (c) Gel exclusion chromatography.

5. Describe the working and application of UV-visible spectrophotometer. 10

6. What do you mean by electrophoresis ? Describe in detail the basic principle and procedure of SDS-PAGE. 10

7. Describe in brief any two of the following : 5×2=10
   (a) Principle and working of colorimeter
   (b) Importance of radioisotopes in biological studies
   (c) Immunoelectrophoresis techniques.

8. What do you understand by MALDI-TOF ? Write its application in Biological Science. 10

9. Enlist the basic components of centrifuge. Discuss its various types in detail. 10

10. Write short notes on any two of the following : 5×2=10

(a) pH meter

(b) NMR spectrometer

(c) X-ray crystallography.