

B.Sc. Second Year CBCS Pattern Semester-IV
USBCT-C08 - Biochemistry Paper-II
Biophysical and Biochemical Techniques II

P. Pages : 2

Time : Three Hours



GUG/W/23/11999

Max. Marks : 50

- Notes :
1. All questions are compulsory.
 2. All questions carry equal marks.

1. Describe in detail the separation of plasma proteins by paper electrophoresis. **10**

OR

- a) Discuss factors affecting electrophoretic mobility. **2½**
- b) Write a note on different solubilizers used in gel electrophoresis. **2½**
- c) Describe high voltage electrophoresis. **2½**
- d) Describe different modes of gel electrophoresis. **2½**

2. Write an essay on isoelectric focusing. **10**

OR

- a) Write a note on RIA. **2½**
- b) Give the principle of disc-gel electrophoresis. **2½**
- c) Describe the technique of immuno electrophoresis. **2½**
- d) Briefly describe the technique of ELISA. **2½**

3. Describe the principle & technique of G-M counting in detail. **10**

OR

- a) Describe different patterns of radioactive decay. **2½**
- b) Give the clinical applications of isotopes. **2½**
- c) Write a note on autoradiography. **2½**
- d) Describe how energy is transferred in liquid scintillation counting. **2½**

4. Give a detailed account on density gradient centrifugation. **10**

OR

- a) Describe the isolation of cell components by differential centrifugation. 2½
- b) Write a note on high speed centrifuge. 2½
- c) Describe how molecular weight is determined by sedimentation velocity method. 2½
- d) Discuss basic principle of centrifugation. 2½

5. Answer **any ten** of the following-

- a) Give one application of cellulose acetate electrophoresis. 1
- b) Name any two types of gel used in gel electrophoresis. 1
- c) Name the tracking dye used in gel electrophoresis. 1
- d) Give the full form of PAGE. 1
- e) Why is disc-gel electrophoresis so called? 1
- f) Give one application of disc gel electrophoresis. 1
- g) Give one point of difference between radioactive & stable isotope. 1
- h) Define Curie. 1
- i) Name the scientist behind the discovery of radioactivity. 1
- j) Give the full form of RCF. 1
- k) Give the operating speed of an ultracentrifuge. 1
- l) Name any one type of rotor used in centrifugation. 1
