

USBCTC08 - Biochemistry Paper-II (Biophysical and Biochemical Techniques-II)

P. Pages : 2

Time : Three Horus

**GUG/S/19/11999**

Max. Marks : 50

Notes : 1. All questions are compulsory and carry equal marks.

1. Discuss Gel electrophoresis with. **10**
- i) Types of gel.
 - ii) Solubilizers.
 - iii) Electrophoretic procedure.
 - iv) Detection of separated components.

OR

- a) Write a short note on factors affecting electrophoretic mobility. **2½**
 - b) Discuss the applications of paper electrophoresis. **2½**
 - c) Give the techniques of cellulose acetate electrophoresis. **2½**
 - d) Write a note on high voltage electrophoresis. **2½**
2. Give a account on **10**
- i) Radioimmuno assay.
 - ii) ELISA

OR

- a) Give the principle of disc gel electrophoresis. **2½**
 - b) Give the principle of isoelectric focusing. **2½**
 - c) Give the applications of SDS – PAGE electrophoresis. **2½**
 - d) Write a note on ampholyte used in isoelectric following. **2½**
3. What is isotopic tracer technique? Explain principle and applications of tracer techniques. **10**

OR

- a) Write a note on Geiger-Muller counter. **2½**
- b) Give the principle of scintillation counter. **2½**
- c) Give the application of ^{131}I and ^3H in the field of biology. **2½**
- d) Write a note on radioactive isotopes. **2½**

4. Discuss the differential centrifugation with its significance. 10

OR

- a) Give the principle of centrifugation. 2½
- b) Write a note on different types of centrifuge. 2½
- c) Write a note on types of rotors. 2½
- d) What is wall effect? 2½

5. Attempt **any ten** of the following. 10

- a) What is electrophoresis?
- b) Name any two buffer systems used in paper electrophoresis.
- c) Give the application of cellulose acetate electrophoresis (any two)
- d) Define immunoelectrophoresis.
- e) Give full form of SDS-PAGE.
- f) Define isoelectric point of protein.
- g) Define radioactive decay.
- h) What is unit of radioactivity?
- i) What is autoradiography?
- j) Give full form of RCF.
- k) What is other name of isopycnic centrifugation?
- l) Define sedimentation coefficient.
