

B.Sc. S.Y. (CBCS Pattern) Sem-IV
**USBCTC-08 : Biochemistry Paper-II : Biophysical and Biochemical
Techniques-II**

P. Pages : 2

Time : Three Hours



GUG/W/22/11999

Max. Marks : 50

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

1. Give an detail account of paper electrophoresis. 10

OR

a) Discuss the factors which affects the mobility of molecule in electrophoresis. 2½

b) What is solubilize? Explain with two example. 2½

c) Write a note on types of gel. 2½

d) Write a note on detection method, of electrophoresis 2½

2. Give on detail account of SDS – PAGE electrophoresis. 10

OR

a) Write a note on RIA. 2½

b) Give the principle of disc gel electrophoresis. 2½

c) Give the principle of isoelectric focusing. 2½

d) Write a note on immune electrophoresis. 2½

3. Write a note on. 10

i) Geiger – Muller counter. ii) Scintillation counter.

OR

a) Give the application of ¹⁵N & ¹⁴C in the field of biology. 2½

b) Write a note on radioactive isotopes. 2½

c) Give the principle of tracer techniques. 2½

d) Explain how tracer techniques useful in metabolic study. 2½

4. Discuss in detail density gradient centrifugation. 10

OR

a) Discuss the principle of differential centrifugation. 2½

- b) Write a note on different types of centrifuge. 2½
- c) Write a note on different types of rotary. 2½
- d) What is wall effect. 2½

5. Attempt **any ten** from following.

- a) Define electrophoresis. 1
- b) Name any two buffer systems used in paper electrophoresis. 1
- c) Give one application of high voltage electrophoresis. 1
- d) Define Isoelectric point. 1
- e) Give one example of ampholyte. 1
- f) Give full form of LISA. 1
- g) Define radioactive decay. 1
- h) What is unit of radioactivity? 1
- i) What is autoradiography? 1
- j) Give full form of RCF. 1
- k) Define sedimentation coefficient. 1
- l) Give one application of ¹³¹I. 1
