NTK/KW/15–5868

Fourth Semester B. Sc. Examination

BIOCHEMISTRY

Paper – II

(Biophysical and Biochemical Techniques)

Time : Three Hours] [Max. Marks : 50

N. B. : (1) All questions are compulsory and carry equal marks.
(2) Draw diagrams wherever necessary.

1. Describe gel–electrophoresis with respect to types of gels and solubilizers used. 10

OR

(a) Describe factors affecting electrophoretic mobility. 5

(b) Write note on paper electrophoresis. 5

2. Give in detail the technique of Disc–Gel electrophoresis. 10

OR

Write note on :

(a) Immunodiffusion. 5

(b) Radioimmunoassay. 5

3. Describe in detail instrumentation and use of Geiger – Muller counter and scintillation counter for measurement of radioactivity. 10

OR

(a) Write a note on Mass Spectrometry. 5

(b) Describe applications of isotopic tracer techniques in biological sciences. 5

4. Describe the various types of Centrifuges in detail. 10

OR

Write notes on :

(a) Preparative Centrifugation. 5

(b) Analytical Centrifugation. 5

5. Solve any **Ten** of the following :—

(I) What is meant by electrophoresis ? 1

(II) Name any one commonly used buffers in electrophoresis. 1

(III) Name any one stain used for detection of proteins after electrophoresis. 1

(IV) ELISA stand for ———— . 1

(V) What are carrier ampholytes ? 1

(VI) Give one application of SDS – PAGE electrophoresis. 1

(VII) What are isotopes ? 1

(VIII) What is quenching ? 1

(IX) Define disintegration constant. 1

(X) What is the fullform of RCF ? 1

(XI) Define Sedimentation Coefficient. 1

(XII) Name the centrifugation technique used for isolation of cell components. 1