DCCB – 401

IV Semester B.Sc. Examination, September/October 2023
(NEP – Freshers)
BIOCHEMISTRY
Analytical Biochemistry

Time : 2½ Hours | Max. Marks : 60

Instructions : 1) ***All*** *Sections are* ***compulsory***.
2) *Section –* ***A*** *: Answer* ***any five***.
3) *Section –* ***B*** *: Answer* ***any four***.
4) *Section –* ***C*** *: Answer* ***any three***.

SECTION – A

Answer **any five** of the following. **(5×2=10)**

1. a) Comment on precipitation method.
   b) Mention the types of centrifugation.
   c) Write the principle of GLC.
   d) Define R_f Value.
   e) List out the properties of β-rays.
   f) Give an account on the principle of ESR spectroscopy.
   g) Write any 2 applications of ^{14}C.

SECTION – B

Answer **any four** of the following. **(4×5=20)**

2. Explain about sample preparation types.
3. Discuss in detail about principle and applications of ion-exchange chromatography.
4. Add an account on cellulose acetate electrophoresis.
5. Describe about the detection of radioactivity by scintillation counter.
6. Discuss about principle and applications of Raman Spectroscopy.
7. Write a note on applications of Radioisotopes with suitable example.

P.T.O.

SECTION – C

Answer **any 3** questions. **(3×10=30)**

8. Discuss in detail about Tiselius moving boundary and paper electrophoresis.

9. a) Explain the principle and applications of UV-visible spectrophotometer.
   b) Write a note on biological effects of radiation. **(5+5)**

10. Describe about principle and applications of immuno-electrophoresis.

11. a) Explain the principle of pulse field electrophoresis.
    b) Write a note on differential centrifugation and ultracentrifugation. **(5+5)**

12. a) Add an account on biological effects of radiation.
    b) Write a note on radio labelling. **(5+5)**
