

B.A. / B.Com. / B.Sc. (Part-I) (NEP) Semester-II  
**SEC48 - Biochemistry - Bioanalytical Techniques**

P. Pages : 2

Time : Two Hours



**GUG/S/25/16439S**

Max. Marks : 40

---

1. Explain the principles and applications of colorimetry. 8

**OR**

a) Define spectroscopy. 2

b) What is the basic principle of UV spectroscopy? 2

c) Differentiate between UV and visible spectroscopy. 2

d) Mention any two applications of spectroscopy. 2

2. Describe different types of rotors used in centrifugation. 8

**OR**

a) Define centrifugation. 2

b) What is the principle behind centrifugation? 2

c) Mention any two types of centrifuges. 2

d) List any two applications of centrifugation. 2

3. Explain the principle and applications of thin layer chromatography. 8

**OR**

a) What is chromatography? 2

b) Differentiate between paper chromatography and thin layer chromatography. 2

c) Mention two uses of ion exchange chromatography. 2

d) What is affinity chromatography used for? 2

4. Describe the different types of electrophoresis techniques. 8

**OR**

a) Define electrophoresis. 2

b) What is the principle behind electrophoresis? 2

- c) Differentiate between paper and gel electrophoresis. 2
- d) Mention any two applications of electrophoresis. 2

5. Attempt **any eight** of the following.

- a) What is the full form of UV in UV spectroscopy? 1
- b) What is the function of a rotor in centrifugation? 1
- c) Define chromatography. 1
- d) What is the principle of paper electrophoresis? 1
- e) Name one application of colorimetry. 1
- f) What is the function of rotor? 1
- g) How is the size of gel adjusted w, r, t the percentage of gel? 1
- h) Name any two types of centrifuge. 1
- i) What is the main advantage of gel electrophoresis? 1
- j) What is an application of UV spectroscopy? 1
- k) Name one factor that affects centrifugation speed. 1
- l) What is the purpose of a buffer in electrophoresis? 1

\*\*\*\*\*