

2 ½ Hours

Total Marks: 75

1. Attempt **all** questions.
2. **All questions** carry **equal** marks.
3. Draw **neat labeled diagrams** wherever necessary.
4. Use of **log tables** and **non-programmable calculator** is **allowed**.
5. For **Q 2, Q 3 and Q 4** attempt A and B **OR** C and D.

Q 1 Do as directed (Any fifteen)**15**

1. _____ sampling requires minimum knowledge of bulk material.
 - a) Systematic
 - b) Random
 - c) Gross
2. Which of the following affects the procedure of sampling?
 - a) Size of sample
 - b) Cost of sampling
 - c) Location of sample
3. Partition coefficient and distribution ratio will be _____.
 - a) always equal
 - b) always different
 - c) equal if molecular condition is same
 - d) equal when molecular condition is different
4. High boiling point liquids are separated using _____.
 - a) Fractional distillation
 - b) Vacuum distillation
 - c) Filtration
5. Liquid-liquid extraction is also known as _____.
 - a) Solvent extraction
 - b) Filtration
 - c) Vacuum distillation
6. Solubility _____ with increase in temperature
 - a) increases
 - b) decreases
 - c) remains the same
7. Centrifugation is used for separation of solid from _____.
 - a) Solid
 - b) Liquid
 - c) Gases
8. Which of the following is a primary metabolite?
 - a) Amino acids
 - b) Terpenoids
 - c) Phenolics
9. Cholesterol is an example of _____.
 - a) Steroid
 - b) Phenolic
 - c) Alkaloid
10. Isoprenes are the basic unit of _____.
 - a) Terpenoids
 - b) Alkaloids
 - c) Phenolics
11. What does TLC stand for?
 - a) Thick layer chromatography
 - b) Thin layer chromatography
 - c) Thick liquid chromatography

Q. 4 B Compare and contrast between addition and condensation polymers giving suitable examples. **07**

OR

Q. 4 C Explain the different methods of synthesis of nanomaterials. **08**

Q. 4 D What are nanoparticles? Explain their properties. **07**

Q. 5 Write Short notes on **any three** of the following **15**

- a. Non-Random Sampling.
- b. Secondary metabolites.
- c. Alkaloids.
- d. Thermoplastics.
- e. Nanomaterial.