

BP-701 T (Instrumental Methods of Analysis)

B.Pharm-7th (PCI)

Time : 3 Hours

Max. Marks : 75

Note: The questions paper contains three section I, II, III, Section I is compulsory. Attempt any two questions from section II and attempt any seven questions from section III.

SECTION-I

(10×2=20)

Short Answer (Compulsory)

1. Attempt all questions
 - a) Define the term quenching.
 - b) What is difference between chromophores and auxochromes?
 - c) Enlist two applications of Flame photometry.
 - d) Write two application of Nepheloturbidometry.
 - e) State basic principle of partition column chromatography.
 - f) What is reverse phase in TLC?
 - g) Write names of different types of paper chromatography.
 - h) Explain importance of temperature programming in Gas chromatography.
 - i) Write about stationary phase of gel chromatography.
 - j) Enlist two application of affinity chromatography.

SECTION-II

Long Answer (Any Two)

2. a. Explain basic principle and shifts involved in UV spectroscopy. (5)
b. Discuss instrumentation of UV spectrometer. (5)
3. Describe principle, instrumentation and application of atomic absorption spectroscopy. (10)
4. Discuss basic principle, instrumentation, advantages and applications of HPLC. (10)

SECTION-III

(7×5=35)

Short Note Answer (Any Seven)

5. Describe basic principle of paper chromatography. (5)
6. Write short note different types of shift in UV spectrum. (5)
7. Discuss concept of electronic states in Fluorimetry. (5)
8. Discuss various type of detectors used in IR spectroscopy. (5)
9. Explain basic principle and two applications of Thin Layer Chromatography. (5)
10. Explain electrophoresis and its applications. (5)
11. Write a short note Gas chromatography. (5)
12. Describe mechanism of ion exchange process in ion exchange chromatography. (5)
13. Write a short note on fundamental modes of vibration reported in IR spectroscopy. (5)