UKA TARSADIA UNIVERSITY

M. Pharm. (Pharmaceutical Analysis) II Semester

040060202 - Pharmaceutical Analysis-II

SECTION I

Q.1] (a) Answer the following [7 x 1 = 7]

1) What is counter current chromatography?
2) Define super critical fluid.
3) What is a biological sample?
4) What is ultra filtration?
5) Define partition coefficient.
6) What is the principle of dialysis as a sample preparation technique?
7) What is peptide mapping?

(b) Attempt any four [4 x 2 = 8]

1) Explain the terms in SEC: Exclusion limit, Permeation limit.
2) What is the significance of system biocompatibility in peptide mapping?
3) Describe the uses of peptide mapping.
4) Explain column switching as a sample preparation technique.
5) What is the significance of post column derivatization in amino acid analysis?

Q.2]

(1) Discuss the role of SDS-PAGE in analysis of proteins and peptides. **[05]**

OR

(1) What is isoelectric focusing? Explain synthetic carrier ampholytes and immobilized pH gradients in IEF. **[05]**

(2) Discuss the significance of solid phase extraction as a sample preparation technique. **[05]**

OR

(2) Explain the principles and procedures for amino acid sequence analysis. **[05]**

Q.3] Attempt any two [2 x 5 = 10]

(1) Explain the significance of GC-MS in quantification of drugs in biological samples with suitable examples.
(2) What are the advantages of SFC over HPLC and GC? Enlist the components of an instrument used for SFC.
(3) Explain how ion exchange chromatography aid in analysis of proteins and peptides. Discuss factors influencing retention in IEC.

SECTION II

Q.4] (a) Answer the following [7 x 1 = 7]

1) Define conformational polymorphism.
2) What is extractive value?
3) Define Crude fiber content.
4) What is flash chromatography?
5) Enlist the methods used for quantitative analysis of dosage forms containing analgesics and antipyretics.
6) Define Quality Control.
7) What do you mean by pesticidal residue?

(b) Attempt any four [4 x 2 = 8]

1) Residual solvent testing is important in pharmaceutical industry. Justify.
2) Classify analytical techniques used for solid state analysis.
3) How will you determine acid insoluble ash value of crude drugs?
4) Explain the terms: Bitterness index, foaming index.
5) Define Specific absorbance, Molar absorptivity.

Q.5]

(1) Define automated systems. Differentiate between types of automatic analytical systems. **[05]**

OR

(1) Discuss the role of chromatography in identification of plant constituents with suitable examples. **[05]**

(2) Discuss the principles and procedures involved in analysis of pharmaceutical dosage forms containing anti diabetics. **[05]**

OR

(2) Discuss the role of NMR spectroscopy in solid state analysis with suitable examples. **[05]**

Q.6] Attempt any two [2 x 5 = 10]

(1) Discuss the role of titrimetric methods in analysis of antihypertensive and antihistaminic drugs.
(2) Discuss the role of isolation techniques in degradation and impurity analysis.
(3) Explain the principle of flow injection analysis.