

Total No. of Questions : 6]

SEAT No. :

P1997

[5145]-602

[Total No. of Pages : 2

Third Year B. Pharmacy
PHARMACEUTICAL ANALYSIS-IV
(2013 Pattern) (Semester-VI)

Time : 3 hours]

[Max. Marks: 70

Instructions to the candidates:

- 1) All question are compulsory.*
- 2) Answers to the two sections should be written in seperate answer books.*
- 3) Figures to the right indicate full marks.*

SECTION-I

Q1) Classify chromatographic techniques. Explain rate and plate theory. [10]
Discuss column packing techniques.

OR

Write advantages and limitations of HPTLC technique. Discuss various detection systems used in HPTLC.

Q2) Attempt any five of the following. [15]

- a) Discuss any three adsorbent used in TLC.
- b) Define any three chromatographic performance parameters.
- c) Classify planar chromatography with suitable examples.
- d) Discuss applications of column chromatography.
- e) How to increase the efficiency of column?
- f) Write the methods for TLC plate preparation.
- g) Discuss applications of TLC.

Q3) Write a note on any two of the following. [10]

- a) Paper chromatography.
- b) Principle and instrumentation of electrophoresis.
- c) 2D TLC
- d) Instrumentation and applications of DSC.

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SECTION-II

Q4) Explain assay method validation as per ICH guidelines. **[10]**

OR

What are the techniques of measurement of radioactivity.

Q5) Attempt any five of the following. **[15]**

- a) What is meant by Operational Qualification?
- b) What are methods for calculation of Limit of Quantitation?
- c) Explain construction and working of X-ray tube.
- d) Write principle of Thermogravimetry.
- e) Write any three applications of DTA.
- f) Discuss factors affecting TGA results.
- g) State the principle of DTA.

Q6) Write a note on any two of the following. **[10]**

- a) Analytical method specificity
- b) X-ray diffraction applications
- c) Crucibles in TGA
- d) Isothermal Titration Calorimetry

