

Total No. of Questions : 6]

SEAT No. :

P3169

[Total No. of Pages : 2

[5245]-602

T.Y.B.Pharmacy (Semester - VI)
PHARMACEUTICAL ANALYSIS - IV
(2013 Pattern)

Time : 3 Hours]

[Max. Marks :70

Instructions to the candidates:

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

SECTION - I

Q1) Explain the theory of paper chromatography. Discuss the different types of stationary phase and applications of paper chromatography. **[10]**

OR

Explain the theory of HPTLC technique. Discuss the advantages and Detection system in HPTLC.

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

- a) Explain Van Deemter equation.
- b) Discuss the types of column chromatography.
- c) Write the factors affecting efficiency of the column.
- d) Discuss the different types of HPTLC plates.
- e) Write the applications of TLC.
- f) Write various principles of separation in chromatography.
- g) Discuss the pharmaceutical applications of column chromatography.

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

- a) Development of TLC and its evaluation.
- b) Differential Scanning Calorimetry.
- c) "System Suitability Parameters" in chromatography.
- d) Developments of Electrophoresis.

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SECTION - II

Q4) Describe the properties of particles emitted during radioactive decay. [10]

OR

Discuss schematically, the instrumentation associated with X-ray methods.

Q5) Answer any five of the following : [15]

- a) Explain the term Design Qualification with suitable examples.
- b) What are the methods of determination of Precision?
- c) Write principle of DTA
- d) What are sample characteristics affecting TGA results?
- e) Explain with suitable example, how TGA helps to decide the drying temperature.
- f) State parts of DTA apparatus and write function of each part.
- g) Write principle of Isothermal Titration Calorimetry

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

- a) Installation Qualification
- b) Robustness and Ruggedness
- c) Measurement of Radioactivity
- d) Applications of X-ray diffraction methods

