

**T.Y.B.PHARM. SEMESTER-V (2011 COURSE) : WINTER -
2017**
SUBJECT : PHARMACEUTICAL ANALYSIS - III

Day : **Saturday**
Date : **11/11/2017**

Time : **10.00 AM TO 01.00 PM**
Max. Marks : **80**

W-2017-3831

N. B. :

- 1) **Q.No.1** and **Q. No.5** are **COMPULSORY**. Out of the remaining questions attempt **Any TWO** from each section.
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

SECTION - I

- Q.1** Solve **Any FIVE** of the following : **(10)**
- a) What is gas chromatography? Classify gas chromatography with the basic differences.
 - b) Define Chromatography in various ways.
 - c) Compare between adsorption and partition Chromatography.
 - d) Define Retention time and Resolution.
 - e) What are the important requirements of a carrier gas in gas liquid chromatography?
 - f) Write in short principle of gas chromatography.
- Q.2** a) Describe the plate theory and rate theory in detail. **(07)**
- b) Discuss briefly two important detectors used in gas chromatography. **(08)**
- Q.3** a) Explain the principle involved in affinity chromatography and size exclusion chromatography in detail. **(07)**
- b) Discuss in detail columns used in Gas Chromatography. **(08)**
- Q.4** Write short notes on **Any THREE** of the following : **(15)**
- a) Applications of gas chromatography
 - b) Classification of chromatography
 - c) Factors affecting separation in gas chromatography
 - d) Identification of amino acids by adsorption chromatography

P.T.O.

SECTION - II

- Q.5** Solve **Any FIVE** of the following : **(10)**
- a) What precautions one should take while carrying out paper chromatography.
 - b) What is electrophoresis? Describe in brief experimental requirements of moving boundary electrophoresis.
 - c) Give types of anion exchanger resin used in ion exchange chromatography.
 - d) Give the criteria for the selection of the filter paper in paper chromatography.
 - e) Give the factors affecting the separation in ion exchange chromatography.
 - f) What are the advantages of gel permeation chromatography?
- Q.6** a) Discuss in detail the applications of electrophoresis. **(07)**
- b) Discuss the principle of paper chromatography. Add a note on development techniques in paper chromatography. **(08)**
- Q.7** a) Discuss the methods used to pack the columns in gel permeation chromatography. **(07)**
- b) Discuss in detail the applications of ion exchange chromatography in organic, inorganic and biological field. **(08)**
- Q.8** Write short notes on **Any THREE** of the following : **(15)**
- a) Visualizing agents used in paper chromatography
 - b) Instrumentation of capillary electrophoresis
 - c) Applications of gel permeation chromatography
 - d) Comparison between ion exchange and gel permeation chromatography

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