

**T.Y.B.PHARM. SEMESTER-V (CBCS - 2015 COURSE) :
WINTER - 2017**

SUBJECT : PHARMACEUTICAL ANALYSIS-III

Day : Saturday
Date : 11/11/2017

Time : 10.00 AM TO 01.00 PM
Max. Marks : 60.

W-2017-3801

N. B. :

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

SECTION-I

- Q. 1** Attempt any **FIVE** of the following (10)
- a) What do you mean by Capacity factor and Resolution .
 - b) Give the different sources of zone broadening.
 - c) What is slurry packing of a column.
 - d) Compare between Normal phase and Reverse phase chromatography.
 - e) Define the terms Adsorption and Partition paper chromatography.
 - f) Give various solvents used in Paper chromatography.
- Q. 2** a) Discuss theories of column efficiency in detail. (07)
- b) Write note on Visualizing agents in Paper chromatography. (03)
- Q. 3** a) What is Paper chromatography? Give the principle and applications of Paper chromatography. (07)
- b) Give the ideal requirements of Adsorbents used as stationary phase in Column chromatography. (03)
- Q. 4** Write short notes on any **TWO** of the following (10)
- a) Applications of Column chromatography
 - b) Development techniques in Paper chromatography
 - c) Compare between Isocratic and Gradient elution

SECTION-II

- Q. 5** Attempt any **FIVE** of the following (10)
- a) What do you mean by Derivatization in Gas chromatography.
 - b) Explain the term HETP.
 - c) Give the advantages of Gas chromatography.
 - d) Give the procedure for determination of hardness of water by Ion exchange chromatography.
 - e) Give the advantages of Gel permeation chromatography.
 - f) What do you mean by regeneration of column in Ion exchange chromatography.
- Q.6** a) Discuss the principle of Gas chromatography. Add a note on FID and TCD. (07)
- b) Give the applications of Gas chromatography. (03)
- Q.7** a) Explain the principle of Ion exchange chromatography. Write note on Ion exchange resins in IEC. (07)
- b) Give the principle of Gel permeation chromatography. (03)
- Q. 8** Write short notes on any **TWO** of the following (10)
- a) Columns used in Gas chromatography
 - b) Adsorbent used in Gel permeation chromatography
 - c) Temperature control system in GC

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