

**T.Y.B.PHARM. SEMESTER-V (CBCS - 2015 COURSE) :
SUMMER - 2018**

SUBJECT : PHARMACEUTICAL ANALYSIS-III

Day : **Tuesday** Time : **10.00 AM TO 01.00 PM**
Date : **24/04/2018** S-2018-3928 Max. Marks : 60.

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.
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SECTION-I

- Q. 1** Attempt any **FIVE** of the following (10)
- a) Define the terms Chromatography and Partition coefficient.
 - b) Explain the relation between Theoretical plates (N) and HETP (H).
 - c) Give the principle of Column chromatography.
 - d) How will you separate mixture of Amino acid by Paper chromatography.
 - e) Give advantages and disadvantages of Paper chromatography.
 - f) Channeled or loosely packed columns provide poor or insufficient separation, Why?
- Q. 2** a) Describe the Rate theory of chromatography in detail. (07)
- b) Give advantages and disadvantages of Column chromatography. (03)
- Q. 3** a) Discuss in detail packing techniques in Column chromatography. (07)
- b) Give the various stationary phases used in Paper chromatography. (03)
- Q. 4** Write short notes on any **TWO** of the following (10)
- a) Column characteristics
 - b) Applications of Paper chromatography
 - c) Classification of chromatography

SECTION-II

- Q. 5** Attempt any **FIVE** of the following (10)
- a) Define the terms Retention time and Retention volume.
 - b) Give the assay procedure for Hyoscine hydrobromide injection.
 - c) Give the ideal properties of carrier gas used in Gas chromatography.
 - d) Write note on separation of cations by Ion exchange chromatography.
 - e) Give advantages of Gel permeation chromatography.
 - f) Write note on sample injection system in Gas chromatography.
- Q.6** a) Discuss the principle of Gas chromatography. Add a note on columns used in Gas chromatography. (07)
- b) Discuss the applications of Gas chromatography. (03)
- Q.7** a) What do you mean by Ion exchange chromatography. Explain in detail types of Ion exchange resins. (07)
- b) Explain in brief Ion exchange capacity. (03)
- Q. 8** Write short notes on any **TWO** of the following (10)
- a) Temperature programming system in Gas chromatography
 - b) Applications of Ion exchange chromatography
 - c) Adsorbents used in Gel permeation chromatography

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