

**T.Y.B.PHARM. SEMESTER-VI (2011 COURSE) : SUMMER -  
2018**

**SUBJECT : PHARMACEUTICAL ANALYSIS - IV**

Day : **Monday**                      **S-2018-3971**                      Time : **10.00 AM TO 01.00 PM**  
Date : **23/04/2018**                      Max. Marks : **80**

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**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.
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**SECTION - I**

- Q.1** Solve **Any FIVE** of the following : **(10)**
- a) Why TLC is superior to paper and column chromatography?
  - b) What are the different methods used in column packing in HPLC technique.
  - c) How adsorbent and solvents are selected in TLC.
  - d) Compare between HPLC and HPTLC.
  - e) What are the advantages and disadvantages of HPLC?
  - f) Give the basic requirements for TLC.
- Q.2** a) Discuss in detail various applications of TLC. **(07)**
- b) Describe the properties and working of UV and refractive index detectors in HPLC. **(08)**
- Q.3** a) Give the various factors affecting separation in HPLC. **(07)**
- b) Compare between adsorption TLC and partition TLC. **(08)**
- Q.4** Write short notes on **Any THREE** of the following : **(15)**
- a) Reciprocating pump in HPLC
  - b) Visualizing agents used in TLC
  - c) Guard column in HPLC
  - d) Compare between normal phase and reverse phase chromatography

**P.T.O.**

**SECTION – II**

- Q.5** Solve **Any FIVE** of the following : **(10)**
- a) Enlist the supercritical fluids. Give their properties.
  - b) Define the terms  $R_f$  value and  $R_x$  value.
  - c) Give the adulterants found in turmeric powder.
  - d) How instrumentation for SFC does differ form Gas chromatography.
  - e) Give the advantages of HPTLC technique.
  - f) Give the role of food inspector in food analysis.
- Q.6** a) Discuss in detail the applications of HPTLC. **(07)**
- b) Explain in detail the principle and instrumentation of SFC. **(08)**
- Q.7** a) Write in detail the advantages and limitations of supercritical fluid chromatography. **(07)**
- b) Discuss in detail the development techniques of HPTLC in detail. **(08)**
- Q.8** Write short notes on **Any THREE** of the following : **(15)**
- a) Selection of adsorbent and solvent in HPTLC
  - b) Determination of adulterants in milk and milk products
  - c) Compare between band and spot applications of sample
  - d) Responsibilities and duties of food safety officer.

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