

**T.Y.B.PHARM. SEMESTER-VI (2011 COURSE) : WINTER -  
2017**

**SUBJECT: PHARMACEUTICAL ANALYSIS - IV**

Day: **Friday**  
Date: **10/11/2017**

**W-2017-3838**

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

**N.B.:**

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

**SECTION-I**

- Q.1** Answer any **FIVE** of the following: **(10)**
- a) How solvent are selected in TLC?
  - b) How HPLC is superior than other chromatographic techniques?
  - c) Write on normal phase and reverse phase chromatography.
  - d) Give pharmaceutical applications of TLC.
  - e) Give the principle of separation by TLC.
  - f) Write the ideal properties of detectors used in HPLC.
- Q.2** a) Discuss the columns used in HPLC. **(08)**  
b) Explain in detail working of electrochemical and fluorescence detector. **(07)**
- Q.3** a) Write a different methods for the preparation of TLC plates. **(08)**  
b) Explain in detail Visualizing agents used in TLC. **(07)**
- Q.4** Write short notes on any **THREE** of the following: **(15)**
- a) Sample injection system in HPLC
  - b) Advantages of TLC
  - c) Development techniques in TLC
  - d) Pumping system in HPLC

**SECTION-II**

- Q.5** Solve any **FIVE** of the following: **(10)**
- a) What are critical temperature and pressure in SCF?
  - b) Why it is necessary to cover the development chamber during HPTLC.
  - c) How adulterants are analyzed in clove?
  - d) What are essential criteria for selecting of suitable solvents for HPTLC?
  - e) Write advantages of band application over spot application in HPTLC.
  - f) What is food adulteration? Under which act food adulteration is covered?
- Q.6** a) Write principle and Instrumentation of HPTLC. **(08)**  
b) Explain advantages and limitation of super critical fluid chromatography. **(07)**
- Q.7** a) Explain principle and Instrumentation in Super critical fluid chromatography. **(08)**  
b) Write advantages of HPTLC over other chromatographic techniques. **(07)**
- Q.8** Write short notes on any **THREE** of the following: **(15)**
- a) Pharmaceutical application of HPTLC
  - b) Adulterants in green Vegetables
  - c) Post derivatisation of a HPTLC plate
  - d) Application of SCF chromatography

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