T.Y.B.PHARM. SEMESTER-VI (2011 Course) : SUMMER - 2019
SUBJECT: PHARMACEUTICAL ANALYSIS – IV

Day : Thursday
Date : 25/04/2019
S-2019-4450
Time : 10.00 A.M. TO 01.00 P.M.
Max. Marks : 80

N.B.:

1) **Q.No.1** and **Q.No.5** are **COMPULSORY**. Out of the remaining questions attempt **ANY TWO** questions 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 Attempt **Any FIVE** of the following. **(10)**

a) Explain in brief types of adsorbents used in TLC.
b) Give the principle of HPLC.
c) Give the aids of visualization in TLC.
d) Compare between Isocratic and Gradient system of HPLC.
e) How is TLC useful in separation of cations and anions?
f) What is Normal phase and Reverse phase partition chromatography.

Q.2 **a)** Discuss the working of Photo diode array detector and UV detector. **(08)**
b) Explain in detail applications of Thin layer chromatography. **(07)**

Q.3 **a)** What is Thin layer chromatography? Give the principle of TLC. How is it superior to other chromatographic techniques? **(08)**
b) Why degassing of solvent is required before HPLC experiment? Explain in detail different degassing techniques used in HPLC. **(07)**

Q.4 Write Short Notes on **Any Three** of the following. **(15)**

a) Reciprocating pumps
b) Reverse phase adsorption TLC
c) Sample injection system in HPLC
d) Development methods in TLC

SECTION – II

Q.5 Attempt **Any FIVE** of the following. **(10)**

a) Give the properties of CO_2 as supercritical fluid.
b) How the instrumentation of SFC differ from HPLC?
c) Define the terms theoretical plate and HETP.
d) Give the adulterants found in Turmeric and Tea powder.
e) What do you mean by edge effect in chromatography?
f) What is critical point in supercritical fluid chromatography?

Q.6 **a)** Explain the principle and instrumentation of supercritical fluid chromatography. **(08)**
b) Discuss the pharmaceutical applications of HPTLC. **(07)**

Q.7 **a)** Explain in detail instrumentation of HPTLC. **(08)**
b) Discuss the applications of supercritical fluid chromatography. **(07)**

Q.8 Write Short Notes on **Any Three** of the following. **(15)**

a) Role of food inspector
b) Determination of adulterants in milk and milk products
c) Development techniques in HPTLC
d) Determination of adulterants in spices

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