

Third Year Pharm. D (SUPPLEMENTARY) : SUMMER - 2019
SUBJECT: PHARMACEUTICAL ANALYSIS

Day : Tuesday
Date : 02/07/2019

Time: 10.00 A.M. TO 01.00 P.M.
Max. Marks: 70

S-2019-4541

N. B.:

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

SECTION -I

- Q.1 a)** Attempt **ANY FOUR** of the following: **(08)**
- i) How solvents are selected in TLC.
 - ii) Define Specific Conductance & Molar Conductance.
 - iii) Classify electrodes used in pH metry.
 - iv) Write about rotating platinum electrode.
 - v) Write factors affecting column efficiency.
- b)** State GLP guidelines. Explain ISO 9000 **(03)**
- Q.2 a)** Classify chromatographic techniques. Write instrumentation of HPLC with special emphasis on types of detectors. **(07)**
- b)** Give applications of HPTLC. **(05)**
- Q.3 a)** Discuss theories of chromatography. Write a note on principle of GC with a note on FID & TCD. **(07)**
- b)** State applications of thin layer chromatography. **(05)**
- Q.4** Write Short notes on **ANY THREE** **(12)**
- a) Ion exchange resins.
 - b) Electrodes used in potentiometry.
 - c) Amperometric titrations.
 - d) Applications of Paper Chromatography.

P.T.O.

SECTION -II

- Q.5 a)** Attempt **ANY FOUR** of the following: **(08)**
- i)** Mention steps involved in nebulization of sample in flame photometry.
 - ii)** Write types of vibrations in IR.
 - iii)** Write about chemical shift.
 - iv)** State types of peaks in Mass spectroscopy.
 - v)** Discuss theory & principle involved in ESR.
- b)** Write about instrumentation of Polarimeter. **(03)**
- Q.6 a)** Write theory & principle involved in NMR. Explain instrumentation with a neat & labeled diagram with functioning of each part. **(07)**
- b)** State Beer Lambert's law. Discuss deviations leading from it. **(05)**
- Q.7 a)** State theory principle involved in UV. Write instrumentation of double beam UV spectrophotometer. **(07)**
- b)** Write instrumentation of mass with its applications. **(05)**
- Q.8** Write Short notes on **ANY THREE** **(12)**
- a)** Types of Thermal methods with DSC applications.
 - b)** Applications of fluorimetry.
 - c)** Applications of IR with examples.
 - d)** Interferences in AES.

* * * * *