

THIRD YEAR PHARM. D : SUMMER - 2018
SUBJECT: PHARMACEUTICAL ANALYSIS

Day: Monday
Date: 09/04/2018

Time: **10.00 AM to 01.00 PM**
Max. Marks: 70

S-2018-4033

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining 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 books.

SECTION-I

- Q.1** A) Attempt any **FOUR** of the following: **(08)**
- i) Write about visualization techniques used in chromatography.
 - ii) Define Residual current Diffusion current Migration and Faradic current.
 - iii) Explain HETP and column Resolution.
 - iv) Define equivalent and Molar conductance.
 - v) Enlist drugs assayed potentiometrically.
- B) Write about gels used in exclusion chromatography. **(03)**
- Q.2** Write about instrumentation of HPLC with an exhaustive note on pumps and radiation sources used. **(12)**
- Q.3** a) Write applications of GC. **(07)**
b) Enlist types of detectors used in GC. Describe Thermal conductivity detector. **(05)**
- Q.4** Write notes on any **THREE** of the following: **(12)**
- a) ISO elements
 - b) Rotating platinum electrode
 - c) Frontal and Elution analysis
 - d) Applications of paper chromatography

SECTION-II

- Q.5** A) Attempt any **FOUR** of the following: **(08)**
- i) Define Chromophore, Auxochrome.
 - ii) State Bragg's law.
 - iii) Write about Fermi Resonance.
 - iv) Write rules of fragmentation in Mass spectroscopy.
 - v) State factors affecting Vibrational frequency
- B) Write applications of Polarimeter. **(03)**
- Q.6** State and derive Beer Lambert's Law. Explain instrumentation of UV spectrophotometer with exhaustive note on detectors used in UV. **(12)**
- Q.7** a) Write theory principle involved in Flame photometry. Explain instrumentation of flame photometer. **(07)**
b) Write about ESR spectrophotometer. **(05)**
- Q.8** Write notes on any **THREE** of the following: **(12)**
- a) Compare DSC and DTA
 - b) Applications of Mass spectroscopy
 - c) Instrumentation of Fluorimeter
 - d) ICP and DCP