

**B. PHARM.**  
**(SEM-IV) THEORY EXAMINATION 2018-19**  
**PHARMACEUTICAL ANALYSIS-II**

**Time: 3 Hours****Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. Enlist the name of stationary phase used in thin layer chromatography.
  - b. Enlist the gases used in GC.
  - c. Define the term normal phase and reversed phase chromatography.
  - d. What do you understand by the term "Cold Antigen?"
  - e. What do you understand by Rx value?
  - f. Write the applications of autoradiography.
  - g. Write the Nernst equation.
  - h. Write the Van Deemter equation for Column chromatography.
  - i. Name the methods of preparing TLC plates
  - j. Arrange the solvents from high polarity to low polarity: Carbon tetra chloride, chloroform, methanol, n-butanol, acetic acid.

**SECTION B**

- 2. Attempt any three of the following: 10 x 3 = 30**
- a. Write a note on Flash Chromatography.
  - b. Explain the details about Electrode potential and standard electrode potential.
  - c. Write a note on HPTLC. Define the term  $R_f$  value.
  - d. Write a note on GLC.
  - e. Write a note on Paper Chromatography.

**SECTION C**

- 3. Attempt any one part of the following: 10 x 1 = 10**
- (a) Write a detailed note on TLC.
  - (b) Write the details of all five principles involved in chromatography with suitable examples.
- 4. Attempt any one part of the following: 10 x 1 = 10**
- (a) Give the method of preparation and standardization of 0.1N perchloric acid
  - (b) Write a note on Effect of pH on complexation and Metal ion indicators.
- 5. Attempt any one part of the following: 10 x 1 = 10**
- (a) Write a detailed note on Polarography.
  - (b) Enlist types of solvents and drugs analyzed by non-aqueous titrations
- 6. Attempt any one part of the following: 10 x 1 = 10**
- (a) Write a detailed note on Instrumentation of High Performance Liquid Chromatography.
  - (b) Write a detailed note on ELISA.
- 7. Attempt any one part of the following: 10 x 1 = 10**
- (a) Write a note on Kjeldahl method of nitrogen estimation.
  - (b) Write a note on Karl Fischer titration