



## Sessional I (Even) Semester Examination, March 2025

Roll no.....

Name of the Course and semester: B.Pharm IV

Name of the Paper: Physical Pharmaceutics-II

Paper Code: BP 403 T

Time: 1.5-hour

Maximum Marks: 30

**Note:**

- (i) This question paper contains three sections.
- (ii) All the questions are compulsory.

### Section-A

#### Q1. Multiple Choice Questions – Attempt all questions (10 X 1 = 10 Marks)

- i. In electrophoresis, if particles move towards cathode then the particles possess: (CO1)
  - a. Positive charge
  - b. Negative charge
  - c. Neutral
  - d. Bipolar
- ii. Diffusion is governed by which law (CO1)
  - a. Newton's law
  - b. Fick's first law
  - c. Faraday
  - d. None of the above
- iii. In colloidal system, dispersed phase having spherical shape show.... viscosity. (CO1)
  - a. high
  - b. low
  - c. first decrease then increase
  - d. first increase then decrease.
- iv. Protective action of colloids is quantitatively measured by : (CO1)
  - a. tyndall number
  - b. gold number
  - c. brownian number
  - d. zeta number
- v. The phenomenon of light scattering by colloidal particles is known as ..... (CO1)
  - a. Reflection
  - b. Refraction
  - c. Tyndall effect
  - d. Effect of light scattering

- vi. Ostwald viscometer is used to measure viscosity of .....liquids. (CO2)  
a. Newtonian  
b. Non-newtonian  
c. Dilatant  
d. None
- vii. Flow properties if liquid are related to : (CO2)  
a. Viscosity  
b. Surface tension  
c. Interfacial tension  
d. Force of cohesion
- viii. Elastic modulus is the ratio of..... (CO2)  
a. Plasticity/elasticity  
b. Stress/strain  
c. Mobility/fluidity  
d. Force/area
- ix. The thixotropy is based on the phenomenon of ..... interaction. (CO2)  
a. Surface – Surface  
b. Charge – charge  
c. particle-particle  
d. surface-charge
- x. The phenomenon in which sol state transforms to a gel state more readily is .. (CO2)  
a. Thixotropy  
b. Dilatant flow  
c. colloids  
d. Rheopexy

### Section B

**Q. 2 Short Questions: Attempt any two questions (2X 5 = 10 Marks)**

- a. How the addition of electrolytes in colloidal system effects its efficacy. (CO-1)  
b. Classify colloidal system and define with example. (CO1)  
c. Describe mechanism of thixotropy with the help of graphical representation, (CO-2)

### Section C

**Q. 3 Long questions: Attempt any one question (1X10= 10 Marks)**

- a. Elaborate the optical, kinetic and electrical properties of colloidal system . (CO1)  
b.Explain difference between Newtonian and Non-Newtonian system. (CO2)