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B PHARM
(SEM IV) THEORY EXAMINATION 2022-23
PHYSICAL PHARMACEUTICS-II

Time: 3 Hours**Total Marks: 75****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief.****10 x 2 = 20**

- (a) Define the term “coacervation” in colloids.
- (b) Write down the Schulze -Hardy rule with an example.
- (c) What is kinematic viscosity?
- (d) What is negative thixotropy?
- (e) What are multiple emulsions?
- (f) Define the term HLB.
- (g) What is angle of repose?
- (h) Differentiate between true density and bulk density.
- (i) Differentiate between a pseudo-zero order and first-order reaction.
- (j) What do you mean by the term “Photolytic degradation” of a drug?

SECTION B**2. Attempt any twoparts of the following:****2 x 10 = 20**

- (a) Illustrate various non-Newtonian systems including plastic, pseudoplastic, dilatant, and thixotropy in pharmaceutical formulations with proper rheograms.
- (b) Explain different types of deformation of solids, elastic modulus, and Heckel's equation in detail.
- (c) Describe in detail about the methods for determining surface area of particles.

SECTION C**3. Attempt any fiveparts of the following:****5 x 7 = 35**

- (a) Illustrate the optical and kinetic properties of colloidal dispersion.
- (b) Explain any one method for determination of viscosity of Newtonian systems in detail.
- (c) Discuss the various signs of instability in an emulsion and methods for its preservation.
- (d) Differentiate between flocculated and deflocculated suspensions and methods for formulating any suspension.
- (e) Describe the working principle and method for particle size determination using the Andreasen pipette apparatus with its labelled diagram.
- (f) Derive the equation for zero-order reaction and determine the half-life and shelf life of any zero-order reaction using the same equation.
- (g) Explain the method involved in the accelerated stability testing for determination of expiration dating of any pharmaceutical dosage form.