



PAPER ID-311873

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Subject Code: BP403T

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BPHARM
(SEM IV) THEORY EXAMINATION 2023-24
PHYSICAL PHARMACEUTICS II – THEORY

TIME: 3HRS**M.MARKS: 75****Note: 1.** 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 Schulze -Hardy rule.
b.	Define the term “gold number.”
c.	Define dilatancy with examples.
d.	Explain each term involved in the Heckel’s equation.
e.	Define phase inversion of an emulsion.
f.	State the importance of “HLB value” of a surfactant.
g.	Define the term multiple emulsion with example.
h.	Differentiate between Feret’s diameter and Martin’s diameter.
i.	What is 'pseudo-zero order kinetics'?
j.	Differentiate between the terms “expiry date” and “half-life” of a drug.

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

a.	Classify different types of viscometers with examples and explain the working principles of a capillary tube viscometer with the help of neat diagram.
b.	Explain in brief the various methods used for the determination of particle size.
c.	Illustrate the accelerated stability testing for determination of expiration dating of pharmaceutical dosage forms in detail.

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

a.	Classify colloids and compare the general properties of colloidal dispersions.
b.	Explain the optical and electrical properties of colloidal dispersions.
c.	Explain the effects of thixotropy in pharmaceutical formulations with suitable examples.
d.	Describe the theories of emulsification.
e.	Differentiate between flocculated and deflocculated suspensions with examples.
f.	Explain the derived properties of powders.
g.	Define first order reaction. Derive the equations for the same and determine the shelf life and half-life for the first order reactions from that equation.