

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[B.PHARM 0323]

MARCH 2023  
(SEPTEMBER 2022 EXAM SESSION)

Sub. Code: 2042

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)  
PCI Regulation 2017 – SEMESTER IV  
PAPER III – PHYSICAL PHARMACEUTICS II

*Q.P. Code: 562042*

**Time: Three hours**

**Maximum: 75 Marks**

**I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)**

1. Explain the term rheology and its application in pharmacy. Write in detail about measurement of thixotropic coefficient.
2. Explain the various theories of emulsification.
3. Enumerate the various methods to determine surface area. Explain in detail about determination of surface area using Quantasorb Instrument.

**II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)**

1. Optical Properties of Colloids.
2. Emulsion formulation by HLB Method.
3. Describe the effect of temperature on the rate of reaction.
4. Differentiate Lyophilic, Lyophobic and Association colloids based on their general properties.
5. Derive second order rate constant and half life.
6. Photolytic degradation and its prevention.
7. Explain the principle, working procedure, advantage and use of Ostwald viscometer.
8. Formulation of flocculated and deflocculated suspension.
9. What is true density? Explain the determination of true density by liquid displacement method.

**III. Short answers on: Answer ALL questions. (10 x 2 = 20)**

1. Types of viscometer with examples.
2. Edmundson Equation.
3. Specific acid-base catalysis.
4. Classify emulsion.
5. Degree of Flocculation.
6. Packing arrangement of powders.
7. Martin diameter.
8. Rheological properties of emulsion.
9. Recommend any two suitable remedy to prevent hydrolysis of medicinal drugs.
10. Define Micro emulsion.

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