

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

**[BPHARM 0122]**

**JANUARY 2022  
(MARCH 2021 EXAM SESSION)**

**Sub. Code: 2033**

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)**

**PCI Regulation 2017 – SEMESTER III**

**PAPER II - PHYSICAL PHARMACEUTICS I**

***Q.P. Code: 562033***

**Time: Three hours**

**Maximum: 75 Marks**

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

1. Explain briefly about the various factors influencing solubility of Drugs.
2. Describe briefly about the various classification of Complexation with examples.
3. Define Isotonic solutions and explain the methods to determine the tonicity of solutions.

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

1. HLB Scale.
2. Dielectric constant & dipole moment.
3. Eutectic mixtures.
4. Crystalline solids.
5. Spreading coefficient.
6. Relative humidity and latent heat.
7. Sorensen's pH scale.
8. Buffers in pharmaceutical & biological systems.
9. Define Vapour pressure and how the total Vapour pressures of liquid mixtures are measured?

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

1. Define surface tension & interfacial tension.
2. Raoult's law.
3. Classification of surfactants.
4. Distribution law.
5. Define Amorphous & Polymorphism.
6. Equation to determine distribution coefficient.
7. BET equation.
8. CMC.
9. CST- definition and application.
10. What is buffer capacity?

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