GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. - SEMESTER–III • EXAMINATION – SUMMER -2021

Subject Code: BP302TP   **Date: 27/08/2021**
Subject Name: Physical Pharmaceutics -I
Time: 02:30PM to 05:30PM   **Total Marks: 80**
Instructions:
1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q. 1	**(a)** Explain the Temperature-Composition Diagram of Phenol- Water system.	**06**
	(b) Define Polymorphism. Describe its application in Pharmacy.	**05**
	(c) Define Refractive Index. How is it determined? Give its application.	**05**
Q. 2	**(a)** State and Explain Raoult's Law. Discuss deviations from Raoult's Law.	**06**
	(b) Explain the component of an Aerosol. Discuss the application of Aerosols.	**05**
	(c) Write a note on Optical rotation.	**05**
Q. 3	**(a)** Define Surface tension. Discuss the capillary rise method for Surface tension.	**06**
	(b) Write a short note on Surface active agent.	**05**
	(c) Discuss about Spreading Co efficient.	**05**
Q. 4	**(a)** Explain Nernst Distribution Law in detail. Explain its application.	**06**
	(b) Write a note on Liquid Crystal.	**05**
	(c) Describe Sorensen's pH Scale.	**05**
Q. 5	**(a)** Enumerate method of Analysis of Complex. Explain any one in detail.	**06**
	(b) Write a note on Inclusion complex.	**05**
	(c) Give Classification of Complex. Explain application of complex.	**05**
Q. 6	**(a)** Discuss the Application of Drug- Protein Binding in Drug activity.	**06**
	(b) Describe method for estimating the Buffer capacity of solution.	**05**
	(c) Define pH. Explain any one method for determination of pH.	**05**
Q. 7	**(a)** Write a note on Langmuir Adsorption and give its derivation.	**06**
	(b) Describe the method of calculation of HLB by different techniques.	**05**
	(c) Define Adsorption. Differentiate between Physical and Chemical adsorption.	**05**

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