

**GUJARAT TECHNOLOGICAL UNIVERSITY****B.Ph. - SEMESTER-III • EXAMINATION –WINTER -2023****Subject Code: Physical Pharmaceutics-I****Date: 11/01/2024****Subject Name: BP302TP****Time: 10:30 AM to 1:30 PM****Total Marks: 80****Instructions:**

- 1. Attempt any five questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

<b>Q.1</b>	(a) Describe solubility of gases in liquids	<b>06</b>
	(b) Explain the solute solvent interactions for polar and non polar solvents.	<b>05</b>
	(c) Write a short note on buffer capacity	<b>05</b>
<b>Q.2</b>	(a) Discuss on applications of buffers.	<b>06</b>
	(b) Discuss the electric properties of interfaces.	<b>05</b>
	(c) Explain law of distribution	<b>05</b>
<b>Q.3</b>	(a) Write a short note on buffered isotonic solutions	<b>06</b>
	(b) Define solubility. Describe the influence of surfactants on solubility.	<b>05</b>
	(c) Write a brief note on refractive index	<b>05</b>
<b>Q.4</b>	(a) Write a short note on dielectric constant	<b>06</b>
	(b) Write a short note on Rault's law	<b>05</b>
	(c) Discuss the structure, properties and significance of liquid crystals.	<b>05</b>
<b>Q.5</b>	(a) Write applications of drug protein binding in drug activity.	<b>06</b>
	(b) Write a note on Aerosols.	<b>05</b>
	(c) Write a note on surface active agents.	<b>05</b>
<b>Q.6</b>	(a) Define HLB. Write any two methods for determination of HLB.	<b>06</b>
	(b) Classify the complexes and explain chelates.	<b>05</b>
	(c) Write a short note on Spreading Coefficient.	<b>05</b>
<b>Q.7</b>	(a) Write a note on polymorphism.	<b>06</b>
	(b) Discuss on crystalline structures of complexes.	<b>05</b>
	(c) Write a short note on Eutectic mixtures	<b>05</b>

\*\*\*\*\*