Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Ph. - SEMESTER– II • EXAMINATION – SUMMER-2018

Subject Code: 220006 **Date: 01/06/2018**

Subject Name: Physical Pharmacy

Time: 10:30 AM TO 01:30 PM **Total Marks: 80**

Instructions:

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

Q.1	(a)	Explain Phase rule in details.	06
	(b)	Explain Polymorphism with examples.	05
	(c)	Define tonicit , how will you measure tonicity of Pharmaceutical preparations?	05
Q.2	(a)	Explain Capillary rise method in determining Surface tension with necessary equations.	06
	(b)	Give the general principles of solubility and solvent-solute interactions.	05
	(c)	Explain the effect of pressure, temperature and chemical reaction for solubility of gasses in liquids.	05
Q.3	(a)	Write Bunsen Absorption Co efficient with its applications.	06
	(b)	Explain Phase equilibrium for system containing two components (liquid + liquid) and represent diagrammatically with examples.	05
	(c)	How will you adjust tonicity of Pharmaceutical preparations? Explain with necessary examples.	05
Q.4	(a)	Write a note on Surface Active Agents.	06
	(b)	Describe the method of calculation of HLB by different techniques.	05
	(c)	Explain Buffer Equation and Buffer Capacity.	05
Q.5	(a)	Explain the theory behind Stability of Emulsions.	06
	(b)	Write in detailed note on non Newtonian systems.	05
	(c)	Enumerate Pharmaceutical applications of colloids.	05
Q. 6	(a)	Define Micromeritics. What are the different methods in determining particle size? Explain any two methods in detail with necessary equations.	06
	(b)	Discuss methods for determine Particle size and shape.	05
	(c)	Name the two fundamental properties of powders. Explain the application of derived properties of powders in Pharmacy.	05
Q.7	(a)	Write notes on Sedimentation parameters for suspension.	06
	(b)	What a note on : Plastic and Pseudo plastic flow.	05
	(c)	What a note on : thixotropy and Negative thixotropy	05

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