Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BPHARM – SEMESTER II • EXAMINATION – WINTER • 2016

Subject code: 220006 Date: 13-01-2017

Subject Name: Physical Pharmacy

Time: 02:30 pm - 05:30 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) (b) (c)	Explain Phase rule and give its Pharmaceutical applications. Differentiate Polymorphism and Amorphism Explain Phase equilibrium for system containing two components (Solid + liquid) and represent diagrammatically with examples.	06 05 05
Q.2	(a) (b) (c)	Give the general principles of solubility and solvent-solute interactions. Write Bunsen Absorption Co efficient with its applications. Explain the effect of pressure, temperature and chemical reaction for solubility of gasses in liquids.	06 05 05
Q.3	(a) (b) (c)	Explain Buffer Equation and Buffer Capacity. Define tonicit, how will you measure tonicity of Pharmaceutical preparations? How will you adjust tonicity of Pharmaceutical preparations? Explain with necessary examples.	06 05 05
Q.4	(a) (b) (c)	Explain Capillary rise method in determining Surface tension with necessary equations. Describe the method of calculation of HLB by different techniques. Write a note on Surface Active Agents.	06 05 05
Q.5	(a) (b) (c)	Explain the theory behind Stability of Emulsions. Write notes on Sedimentation parameters for suspension. Enumerate Pharmaceutical applications of colloids.	06 05 05
Q. 6	(a) (b) (c)	Define Micromeritics. What are the different methods in determining particle size? Explain any two methods in detail with necessary equations. Discuss methods for determine Particle size and shape. Name the two fundamental properties of powders. Explain the application of derived properties of powders in Pharmacy.	06 05 05
Q.7	(a) (b)	Write in detailed note on Newtonian systems. What a note on: Plastic and Pseudo plastic flow.	06 05
	(c)	What a note on: thixotropy and Negative thixotropy	05
