Seat No.: _____ Enrolment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM - SEMESTER– II. EXAMINATION – SUMMER - 2018

Subject Code: 2220001 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)**	Describe the binding forces of molecules.	**(6)**
	(b)	Write a note on liquid crystals.	**(5)**
	(c)	Discuss two component system containing phenol water liquid phases	**(5)**
Q-2	**(a)**	Explain any one method for measurement of surface and interfacial tensions.	**(6)**
	(b)	Write a short note on spreading coefficients? Derive its equation.	**(5)**
	(c)	Discuss the electric properties of interfaces.	**(5)**
Q-3	**(a)**	Which factors affects complexation and protein binding? Discuss in brief.	**(6)**
	(b)	Classify the complexes and explain chelates.	**(5)**
	(c)	Write applications of drug protein binding in drug activity.	**(5)**
Q-4	**(a)**	Explain Polymorphism.	**(6)**
	(b)	Explain solubility of solid in liquid.	**(5)**
	(c)	Discuss factors influencing solubility of gases in liquid.	**(5)**
Q-5	**(a)**	Which are the methods used for particle size determination? Explain sedimentation method.	**(6)**
	(b)	Discuss the derived properties of powder.	**(5)**
	(c)	Explain method for determining particle surface area of porous materials.	**(5)**
Q-6	**(a)**	Explain Non Newtonian fluids with examples.	**(6)**
	(b)	Define rheology, give the application of rheology in pharmacy.	**(5)**
	(c)	Explain thixotrophy. How to evaluate thixotrophy?	**(5)**
Q-7	**(a)**	Give difference between Lyophilic colloids and Lyophobic colloids. Discuss association colloids.	**(6)**
	(b)	Write a note on physical stability of emulsion.	**(5)**
	(c)	Write a note on factors affecting stability of suspension.	**(5)**

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