Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BPHARM – SEMESTER II (OLD Syllabus) • EXAMINATION – SUMMER • 2015

Subject code: 220006 **Date: 11-06-2015**

Subject Name: Physical Pharmacy

Time: 10:30 am - 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)**	Discuss two component systems containing liquid phases with examples.	**06**
	(b)	Explain Liquid Crystalline State.	**05**
	(c)	Which are the parameters of solubility of solid in liquids? How do you calculate the solubility of weak electrolytes as influenced by pH?	**05**
Q.2	**(a)**	Enlist the methods for adjusting tonicity and pH. Explain any one in detail.	**06**
	(b)	Which are the applications of surface active agent?	**05**
	(c)	Write a short note on buffers in pharmaceutical system.	**05**
Q.3	**(a)**	Explain in detail: General principles of Solubility.	**06**
	(b)	Define spreading Coefficient? Derive its equation.	**05**
	(c)	What is polymorphism? Describe its importance in pharmacy with example.	**05**
Q.4	**(a)**	Discuss the electric properties of interfaces.	**06**
	(b)	Differentiate various types of colloidal dispersion system and give the application of colloids in pharmacy.	**05**
	(c)	Describe the method of calculation of HLB by different techniques.	**05**
Q.5	**(a)**	Write a note on evaluation of suspension.	**06**
	(b)	Explain different identification test for types of emulsion.	**05**
	(c)	Discuss the instability of an emulsion.	**05**
Q. 6	**(a)**	Explain kinetic properties of Colloids.	**06**
	(b)	Describe methods for measurement of particle size.	**05**
	(c)	Discuss the derived properties of powder.	**05**
Q.7	**(a)**	Write a note on applications of rheology in pharmacy.	**06**
	(b)	Write a note on Thixotropy.	**05**
	(c)	Explain non Newtonian type of flow with rheograms, mechanism and suitable examples.	**05**

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