Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BPHARM – SEMESTER II • EXAMINATION – SUMMER • 2015

Subject code: 2220001 **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)**	Explain Non Newtonian flow with rheogram, and with suitable example.	**06**
	(b)	Write note on Thixotropy with its measurement.	**05**
	(c)	Enlist multipoint viscometers and explain any one in detail.	**05**
Q.2	**(a)**	Define suspension. Write a note on factor affecting stability of suspension	**06**
	(b)	Explain Sedimentation Parameter of suspension in detail.	**05**
	(c)	Enlist the physical instability markers of emulsion and explain	**05**
Q.3	**(a)**	Define phase rule. Explain Phase diagram for one component system.	**06**
	(b)	Explain any Binding forces between molecules.	**05**
	(c)	Classify types of complex. Explain inclusion complex in detail.	**05**
Q.4	**(a)**	Define micromeritics. Enumerate different commonly used methods for measurement of particle size determination. Describe any one in detail.	**06**
	(b)	Explain method for determining particle surface area of porous materials.	**05**
	(c)	Give factors affecting powder flow and methods to improve powder flow.	**05**
Q.5	**(a)**	Give difference between Lyophilic colloids and Lyophobic colloids. Discuss association colloids.	**06**
	(b)	Differentiate ideal and real solution. Explain the influence of foreign substances in solubility of liquids in liquids.	**05**
	(c)	Explain kinetic properties of colloids.	**05**
Q. 6	**(a)**	Discuss two component system containing liquid phases.	**06**
	(b)	Write a note on Solute solvent Interaction for polar and non polar solvent.	**05**
	(c)	Give the application of complexes in dosage forms.	**05**
Q.7	**(a)**	Enlist the methods for determination of surface and interfacial tension. Explain capillary rise method.	**06**
	(b)	Write a note on Hydrophilic Lipophilic Balance.	**05**
	(c)	What is Spreading coefficient? Derive its equation.	**05**

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