

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BPHARM – SEMESTER II • EXAMINATION – SUMMER • 2014

Subject code: 2220001

Date: 06-06-2014

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)	Write a note on: Plastic flow, Pseudoplastic flow and Dilatant flow.	06
	(b)	Explain with figure cup and bob viscometer.	05
	(c)	Define and explain: Angle of repose and Carr's Index with their pharmacopoeial specification.	05
Q.2	(a)	Define emulsion with its types. Explain the theory behind stability of emulsion.	06
	(b)	Explain protective colloidal action in details.	05
	(c)	Define suspension. Write a note on factor affecting stability of suspension.	05
Q.3	(a)	Define and Explain phase rule. Discuss phase diagram for one component system.	06
	(b)	Discuss: Liquid crystalline state.	05
	(c)	Explain binding force between molecules.	05
Q.4	(a)	Define micromeritics. Enumerate different methods and commonly used measurement of particle size determination. Describe briefly optical microscopy.	06
	(b)	Explain method for determining particle surface area.	05
	(c)	Discuss porosity and packing arrangement of powder with application of micromeritics.	05
Q.5	(a)	Discuss spreading coefficient. Derive its equation.	06
	(b)	Explain: Wetting phenomena and Electrical double layer.	05
	(c)	Enumerate the methods for the determination of surface and interfacial tension. Explain capillary rise method.	05
Q. 6	(a)	Give difference between Lyophilic colloids and Lyophobic colloids. Discuss association colloids.	06
	(b)	Describe solubility of gases in liquids.	05
	(c)	Differentiate ideal and real solution. Explain the influence of foreign substances in solubility of liquids in liquids.	05
Q.7	(a)	Define complexation. Explain organic molecular complexes.	06
	(b)	Give the application of complexes in dosage forms.	05
	(c)	Give factors affecting powder flow.	05
