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: 6			80
Instr	t. U2.J niction	0 pm - 05.50 pm 10tai Waiks. (	50
111501	1 A1	ttemnt any five questions	
	2. M	ake suitable assumptions wherever necessary.	
	3. Fi	gures to the right indicate full marks.	
01	(a)	Write a note on: Plastic flow, Pseudoplastic flow and Dilatant flow	06
Q.1	(a)	Explain with figure cup and bob viscometer	05
	(c)	Define and explain: Angle of repose and Carr's Index with their	05
	(-)	pharmacopoeial specification.	
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	05
		suspension.	
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	05
		application of micromeritics.	
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.	06
	(1)	Discuss association colloids.	0 <b>-</b>
	(b)	Describe solubility of gases in liquids.	05
	(c)	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

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