

GUJARAT TECHNOLOGICAL UNIVERSITY**B. Pharm. – SEMESTER– II • EXAMINATION – SUMMER-2016****Subject Code: 220006****Date: 15/06/2016****Subject Name: Physical Pharmacy****Time: 10:30 AM to 1:30 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 Newtonian and non-Newtonian system.	06
	(b) Classify various instruments for measurement of viscosity. Describe any one viscometer to find out viscosity of non-Newtonian fluids.	05
	(c) Explain protective colloidal action in detail.	05
Q.2	(a) What are the methods for determining particle size of powder?	06
	(b) Enumerate the derived properties. How are they evaluated?	05
	(c) What is buffer capacity? Discuss methods to evaluate it in brief.	05
Q.3	(a) Write a short note on spreading coefficient.	06
	(b) Write a note on surface active agents.	05
	(c) Discuss the methods of adjusting tonicity and pH of pharmaceutical systems.	05
Q.4	(a) Which are the parameters of solubility of solid in liquids? How do you calculate the solubility of weak electrolytes as influenced by pH?	06
	(b) Write a note on Liquefaction of the gases.	05
	(c) Explain: Phase rule and Partition coefficient.	05
Q.5	(a) Write a short note on determination of rheological properties of liquid.	06
	(b) Discuss structure, properties & significance of liquid crystal.	05
	(c) Differentiate flocculated and deflocculated suspension.	05
Q. 6	(a) Describe the theory of emulsification.	06
	(b) Discuss the instability of an emulsion.	05
	(c) Differentiate between lyophilic and lyophobic colloids.	05
Q.7	(a) Write a note on HLB scale with its importance in pharmacy.	06
	(b) What are the application of rheology in pharmacy	05
	(c) Write a note on Pharmaceutical Buffer.	05
