

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. - SEMESTER– II • EXAMINATION – SUMMER-2017

Subject Code: 2220001

Date: 15/06/2017

Subject Name: Physical Pharmacy

Time: 10:30 AM to 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) Enumerate methods to determine viscosity. Explain any one.	06
	(b) Give detail about Non-Newtonian flow.	05
	(c) Explain shear thinning system.	05
Q.2	(a) Define surface tension. Explain Du-Nouy Ring method.	06
	(b) Write note on spreading co-efficient.	05
	(c) Draw figure of HLB scale. Write methods to determine it.	05
Q.3	(a) Give detail about conductivity method.	06
	(b) What is true density? Explain any one method to determine it.	05
	(c) Define suspension. Explain sedimentation volume and degree of flocculation.	05
Q.4	(a) Define emulsion. Explain mechanism of emulsification.	06
	(b) Explain DLVO theory in brief.	05
	(c) Write note on optical properties of powders.	05
Q.5	(a) Explain solvent solute interaction.	06
	(b) Explain solubility of gas in liquids.	05
	(c) Write classification of complexes. Give detail about metal complexes.	05
Q. 6	(a) Define viscosity. Explain various types of viscosity.	06
	(b) Give in brief about surface free energy.	05
	(c) Explain wetting phenomenon.	05
Q.7	(a) Write note on binding forces between molecules.	06
	(b) Give detail about polymorphism.	05
	(c) What is liquid crystal? Explain in detail.	05
