

Seat No.: _____

Enrolment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY**B.PHARM - SEMESTER– II. EXAMINATION – SUMMER - 2018****Subject Code: 2220001****Date: 01/06/2018****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) Describe the binding forces of molecules. (6)
(b) Write a note on liquid crystals. (5)
(c) Discuss two component system containing phenol water liquid phases (5)
- Q-2** (a) Explain any one method for measurement of surface and interfacial tensions. (6)
(b) Write a short note on spreading coefficients? Derive its equation. (5)
(c) Discuss the electric properties of interfaces. (5)
- Q-3** (a) Which factors affects complexation and protein binding? Discuss in brief. (6)
(b) Classify the complexes and explain chelates. (5)
(c) Write applications of drug protein binding in drug activity. (5)
- Q-4** (a) Explain Polymorphism. (6)
(b) Explain solubility of solid in liquid. (5)
(c) Discuss factors influencing solubility of gases in liquid. (5)
- Q-5** (a) Which are the methods used for particle size determination? Explain sedimentation method. (6)
(b) Discuss the derived properties of powder. (5)
(c) Explain method for determining particle surface area of porous materials. (5)
- Q-6** (a) Explain Non Newtonian fluids with examples. (6)
(b) Define rheology, give the application of rheology in pharmacy. (5)
(c) Explain thixotrophy. How to evaluate thixotrophy? (5)
- Q-7** (a) Give difference between Lyophilic colloids and Lyophobic colloids. Discuss association colloids. (6)
(b) Write a note on physical stability of emulsion. (5)
(c) Write a note on factors affecting stability of suspension. (5)
