

GUJARAT TECHNOLOGICAL UNIVERSITY**B.PHARM SEMESTER-IV- EXAMINATION – WINTER 2022****Subject code: BP403TP****Date:03/01/2023****Subject Name: Physical Pharmaceutics-II****Time: 02:30pm to 05:30pm****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 DLVO theory with energy curves.	06
	(b) Discuss the kinetic properties of colloids.	05
	(c) Explain: Kraft point and Gold number	05
Q.2	(a) Explain Non-Newtonian flow with rheograms.	06
	(b) Give factors influencing viscosity.	05
	(c) Define: Fluidity, Kinematic viscosity, Rheology, Thixotropy, Spurs,	05
Q.3	(a) Enlist physical instability markers of emulsion and discuss in brief.	06
	(b) Differentiate flocculated suspension and deflocculated suspension	05
	(c) Comment: Emulsions are thermodynamically unstable. Justify. Define: Bancroft's rule and Emulsion	05
Q.4	(a) Enumerate the methods for determination of particle size. Explain working principle of coulter counter with labelled diagram.	06
	(b) Discuss the derived properties of powders.	05
	(c) Define: Surface Diameter, Volume Diameter, Projected Diameter, Angle of Repose, Stoke's Diameter	05
Q.5	(a) What is first order kinetics? Derive equation with half life and shelf life for first order kinetics?	06
	(b) Write a short not on accelerated stability study	05
	(c) Explain oxidative decomposition and write its preventive measures.	05
Q. 6	(a) Describe the influence of temperature on the rate of reaction.	06
	(b) Explain: Sedimentation volume and degree of flocculation of suspension.	05
	(c) Write a note on negative Thixotropy.	05
Q. 7	(a) Discuss photolytic degradation and its preventive measures.	06
	(b) Classify the methods used for determination of surface area. Explain air permeability method with diagram.	05
	(c) Describe different types of emulsion.	05
