Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM SEMESTER-IV- EXAMINATION – WINTER 2021

Subject code: BP403TP **Date: 19/02/2022**

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 kinetic properties of colloids.	**06**
	(b)	Write short note on association colloids.	**05**
	(c)	Define Schulze rule. What are its applications?	**05**
Q.2	(a)	Explain non-Newtonian type of flow with rheograms.	**06**
	(b)	Write the concept of viscosity.	**05**
	(c)	Define: Fluidity, Kinematic viscosity, Thixotropy, Rheopexy and Bulges.	**05**
Q.3	(a)	Classify and describe the types of emulsions with suitable examples.	**06**
	(b)	Differentiate flocculated and deflocculated suspensions.	**05**
	(c)	Explain sedimentation volume ratio.	**05**
Q.4	(a)	Enumerate the derived properties of powder and explain Angle of repose.	**06**
	(b)	Give the application of micromeritics in pharmacy.	**05**
	(c)	Define: surface diameter, stokes diameter, arithmetic mean carr's index and porosity.	**05**
Q.5	(a)	Enumerate the factors affecting rate of reaction and explain temperature.	**06**
	(b)	Differentiate order of reaction and molecularity.	**05**
	(c)	Derive the first order rate of reaction equation.	**05**
Q. 6	(a)	Give the principle, working and applications of cup and bob viscometer with clean and neat diagram.	**06**
	(b)	Explain different stages of instability of emulsions.	**05**
	(c)	Write a note on accelerated stability testing in brief.	**05**
Q. 7	(a)	Explain sensitization and protective colloidal action.	**06**
	(b)	Explain the working principle of coulter counter with labeled diagram.	**05**
	(c)	What is hydrolysis? Write the preventive measures of it.	**05**

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