GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER–4 EXAMINATION – WINTER -2024

Subject Code:BP403TP   **Date: 23-12-2024**
Subject Name: Physical Pharmaceutics II
Time:02.30 PM TO 05.30 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)**	Give a short not on accelerated stability testing in expiration dating of pharmaceutical dosage forms.	**06**
	(b)	Which are Physical and chemical factors influencing the chemical degradation of pharmaceutical product? Discuss in brief.	**05**
	(c)	Give factors affecting powder flow and methods to improve powder flow property.	**05**
Q.2	**(a)**	Discuss on: Angle of repose, Carr's Index and Hausner's ratio with their pharmacopoeial specifications.	**06**
	(b)	Enumerate the methods for determining particle size. Discuss in detail about any one method for particle size determination.	**05**
	(c)	Describe in brief about various methods of determination of reaction order.	**05**
Q.3	**(a)**	Write a detail note on physical stability of emulsion.	**06**
	(b)	Describe in detail on: plastic and pseudoplastic flow curves with an examples.	**05**
	(c)	Write a short note on theories of emulsification.	**05**
Q.4	**(a)**	Define Rheology. Give the applications of rheology in pharmacy.	**06**
	(b)	Write a note on thixotropy.	**05**
	(c)	Differentiate: flocculated and deflocculated suspensions.	**05**
Q.5	**(a)**	Discuss on the concept of DLVO theory with energy curve and how this theory is applied in stabilizing the colloidal dispersion.	**06**
	(b)	Give the detail note on Photolytic degradation of drug and also give preventive measures for it.	**05**
	(c)	Write a detailed note on classification of colloids.	**05**
Q. 6	**(a)**	Give the detail note on factors influencing viscosity.	**06**
	(b)	Enumerate different properties of colloids. Explain kinetic properties of colloids.	**05**
	(c)	Write a short note on microemulsion and multiple emulsions.	**05**
Q.7	**(a)**	Draw HLB scale and write in brief about formulation of emulsion by HLB method.	**06**
	(b)	Write a short note on rotational viscometers.	**05**
	(c)	Give the application of micromeritics in pharmacy.	**05**

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