Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM. - SEMESTER– VII • EXAMINATION – SUMMER-2016

Subject Code: 270001 Date: 03/05/2016

Subject Name: Dosage Form Design - I

Time: 2:30 PM to 5:30 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)	Define the following terms: Pinocytosis, Therapeutical equivalence, Similarity factor, Dielectric constant.	**10**
	(b)	Differentiate between accelerated stability study and real time stability study.	**06**
Q.2	(a)	Enlist the chemical properties which affect dosage form design. Discuss Hydrolysis with examples.	**06**
	(b)	Write a note on pharmaceutical excipients used as tablet binder and granulating agent.	**05**
	(c)	Explain photodegradation and its prevention.	**05**
Q.3	(a)	Write a note on Polymorphism and its application.	**06**
	(b)	Differentiate between drug elimination and drug excretion.	**05**
	(c)	Enlist the difference between active transport and passive transport across the gastro intestinal tract.	**05**
Q.4	(a)	Describe the role of dosage form in drug absorption.	**06**
	(b)	Write a note on BCS classification system.	**05**
	(c)	Discuss the selection of organoleptic additives in oral pharmaceutical preparations.	**05**
Q.5	(a)	Explain the rationale in adding overages and its calculation.	**06**
	(b)	What is the importance of particle size, shape and density on dissolution rate and dosage form formulation.	**05**
	(c)	Write a note on matrixing and bracketing techniques in stability study.	**05**
Q. 6	(a)	Discuss the pharmacokinetics methods for measurement of bioavailability.	**06**
	(b)	Explain the role of prodrugs in solving problems of stability and bioavailability of drug in the dosage form.	**05**
	(c)	Describe the influence of protein binding on drug disposition.	**05**
Q. 7	(a)	Give the regulatory requirement for conduction of bio-equivalent studies.	**06**
	(b)	Enlist the compendial apparatus as per USP for dissolution studies. Explain any two.	**05**
	(c)	Write a note on Drug Interactions.	**05**

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