

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm - SEMESTER - VII EXAMINATION - WINTER 2025

Subject Code: 2270001

Date: 13-11-2025

Subject Name: Dosage form Design I

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.**

	Marks
Q.1 (a) Explain physical properties evaluated during preformulation of a drug.	06
(b) State the importance of particle size in formulation.	05
(c) Write a short note on polymorphism.	05
Q.2 (a) Define pharmaceutical excipients. Classify any six of them.	06
(b) Write a note on natural gums used as pharmaceutical additives.	05
(c) Give any five ideal properties of biodegradable polymers.	05
Q.3 (a) Explain passive diffusion and active transport with suitable diagram.	06
(b) Discuss factors influencing drug absorption from GIT.	05
(c) Define plasma protein binding. Mention its significance.	05
Q.4 (a) Describe kinetic principles and order of reaction.	06
(b) Write a note on ICH guidelines for stability testing.	05
(c) Define MKT. How is it useful in stability?	05
Q.5 (a) Explain bioavailability and factors affecting it.	06
(b) State various parameters used for assessment of BA and BE.	05
(c) List steps involved in single-dose bioequivalence study.	05
Q.6 (a) Define BCS and classify drugs with suitable examples.	06
(b) Explain various dissolution test apparatus used for tablets and capsules.	05
(c) Write a note on intrinsic dissolution rate.	05
Q.7 (a) Write in detail storage conditions and packaging components affecting stability of formulation.	06
(b) Define overages and state its applications.	05
(c) What is pinocytosis? Explain with example.	05
