Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM SEMESTER VIII • EXAMINATION – WINTER-2017

Subject Code: 2280001 Date: 02/11/2017

Subject Name: Dosage Form Design-II

Time: 02:30 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)**	Enumerate the factors affecting the designing of oral sustained release drug delivery systems and explain any one in detail.	**06**
	(b)	Discuss the merits and demerits of controlled release formulation	**05**
	(c)	What are loading and maintenance dose? How are they calculated?	**05**
Q.2	**(a)**	Write a note on dissolution and diffusion controlled release system	**06**
	(b)	Describe the key components of osmotic drug delivery system with examples.	**05**
	(c)	Write a note on colon targeted drug delivery system.	**05**
Q.3	**(a)**	Discuss the various formulation approaches for floating drug delivery systems.	**06**
	(b)	Write about In-vitro-In-vivo evaluations of floating drug delivery systems.	**05**
	(c)	Explain pH Sensitive and Prodrug approach to develop colonic Drug Delivery Systems in brief.	**05**
Q.4	**(a)**	Write in brief about OROS-CT and EOP.	**06**
	(b)	Discuss in detail about PULSINCAP Technology.	**05**
	(c)	Write a note on: Microspheres.	**05**
Q.5	**(a)**	Describe formulation and evaluation of transdermal drug delivery system.	**06**
	(b)	Define liposomes and niosomes. Describe their evaluation.	**05**
	(c)	Write a note on: Hydrogel.	**05**
Q. 6	**(a)**	What are pharmacokinetic models? Explain in detail one compartment model.	**06**
	(b)	Describe the method of residuals for determination of absorption rate constant.	**05**
	(c)	Explain Wagner nelson method in detail.	**05**
Q.7	**(a)**	Explain how one can detect nonlinear pharmacokinetics? Explain Michaelis Menten equation for capacity limited process.	**06**
	(b)	Define clinical pharmacokinetics. Explain dosage adjustment in patients with renal failure.	**05**
	(c)	Explain term: Drug interaction. Discuss ADME drug interactions with suitable examples.	**05**

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