Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – VIII • EXAMINATION – WINTER • 2016

Subject Code: 280001 **Date: 18-11-2016**
Subject Name: Dosage Form Design - II
Time: 02:30 pm - 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)**	Enumerate the factors affecting the designing of oral sustained release drug delivery systems and explain any one in detail.	**06**
	(b)	What is the major objective of controlled drug delivery system? Give advantages and disadvantages of such a system	**05**
	(c)	Write a note on dissolution and diffusion controlled release system	**05**
Q.2	**(a)**	Write a note on buccal drug delivery systems.	**06**
	(b)	Explain loading dose and maintenance dose used in controlled release formulation	**05**
	(c)	Describe the various approaches for colon targeted drug delivery system	**05**
Q.3	**(a)**	Describe osmotic pressure controlled systems in brief.	**06**
	(b)	Discuss the Evaluation methods for Transdermal drug delivery systems.	**05**
	(c)	Describe liposomes as a drug delivery system in brief.	**05**
Q.4	**(a)**	Describe development of ocular controlled drag delivery systems.	**06**
	(b)	Describe various methods for preparation of Nanosuspension	**05**
	(c)	Give an account of approaches for designing of gastro retentive dosage forms.	**05**
Q.5	**(a)**	Explain dosage adjustment in patients with renal and hepatic failure.	**06**
	(b)	Explain the method of residuals for the calculation of absorption rate constant form oral data.	**05**
	(c)	Write a note on: Hydrogel.	**05**
Q. 6	**(a)**	Give the criteria for obtaining valid urinary excretion method.	**06**
	(b)	Explain how one can detect nonlinear pharmacokinetics? Explain Michaelis Menten equation for capacity limited process.	**05**
	(c)	Explain the various evaluation parameters for gastro retentive and colon targeted drug delivery system.	**05**
Q.7	**(a)**	Define “Drug interaction”. Explain pharmacokinetic drug interactions giving suitable examples.	**06**
	(b)	Define clearance, total body clearance and organ clearance. What is extraction ratio?	**05**
	(c)	What are pharmacokinetic models? Explain any one compartment model in details.	**05**

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