

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 drug 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 from 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
