Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Ph. SEMESTER– VIII• EXAMINATION – WINTER-2017

Subject Code: 280001 **Date: 02-11-2017**

Subject Name: Dosage Form Design-II

Time: 02:30 pm to 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)**	Give the difference between sustained and controlled drug delivery system. Describe the evaluation of oral controlled drug delivery system.	**06**
	(b)	Describe the advantage, disadvantage and limitation of sustained release formulation.	**05**
	(c)	Describe loading and maintenance dose in controlled release formulation with equations.	**05**
Q.2	**(a)**	Explain Pharmacokinetic. Explain typical plasma level time curve affect single oral dose.	**06**
	(b)	Describe Wegner-Nelson method for determination of adsorption rate constant.	**05**
	(c)	Explain in detail compartmental and non compartmental approach.	**05**
Q.3	**(a)**	Mention the method of evaluation of microspheres in detail.	**06**
	(b)	Classify the polymer used in preparation of matrix tablet. Give two name of each class.	**05**
	(c)	What is Nano particle. Give any one method in detail for preparation of Nano particle.	**05**
Q.4	**(a)**	Explain renal clearence. Describe graphical method for determination of renal clearance.	**06**
	(b)	Write a note on osmotic ocular inserts. Explain parts of ocular inserts.	**05**
	(c)	Explain non linear pharmacokinetic using michaeles menten equation.	**05**
Q.5	**(a)**	Describe the ideal requirements for Sustained release formulation. Explain lag time, burst effect and reservoir system with respect to controlled release formulation.	**06**
	(b)	Explain Pharmacokinetic and Pharmacodynamic parameters to be consider for designing modified drug delivery system.	**05**
	(c)	Write a note on Hydrogel.	**05**
Q. 6	**(a)**	Discuss Mechanism of release of drug from controlled release drug delivery system.	**06**
	(b)	Explain the Pharmaceutical approach to develop colonic drug delivery system in brief.	**05**
	(c)	Explain Volume of distribution and distribution coefficient.	**05**
Q.7	**(a)**	What criteria are necessary for selection of drug as a candidate for controlled release formulation. Explain each in brief.	**06**
	(b)	Define clinical pharmacokinetic and explain dosage adjustment in patient with renal failure.	**05**
	(c)	Discuss the formulation of parenteral emulsion and suspension.	**05**

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