

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**
