

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – VIII • EXAMINATION – WINTER • 2014

Subject Code: 280001

Date: 25-11-2014

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.**

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|-------------|--|-----------|
| Q.1 | (a) Explain lag time, burst effect and reservoir systems w.r.t. control release formulations. | 06 |
| | (b) Describe the ideal requirements for sustained release formulations. | 05 |
| | (c) Give the difference between conventional and controlled release system. Describe the evaluation of oral controlled drug delivery system. | 05 |
| Q.2 | (a) Explain pharmacokinetic and pharmacodynamic parameters which are considered in design of modified drug delivery systems? | 06 |
| | (b) Describe the key components of osmotic drug delivery system with examples. | 05 |
| | (c) Discuss limitations of conventional ophthalmic formulations. Describe novel ophthalmic formulations. | 05 |
| Q.3 | (a) Describe formulation and evaluation of transdermal drug delivery system. | 06 |
| | (b) What are rationales for colon targeting? Name different approaches for colon targeting. | 05 |
| | (c) Define liposomes and niosomes. Describe their evaluation. | 05 |
| Q.4 | (a) Which are rationales for gastro-retentive drug delivery? Explain expandable approach. | 06 |
| | (b) Describe preparation and evaluation of parenteral suspension. | 05 |
| | (c) Write a note on sublingual drug delivery system. | 05 |
| Q.5 | (a) Explain pharmacokinetics. Explain a typical plasma level time curve after single oral dose. | 06 |
| | (b) What are pharmacokinetic models? Explain in detail compartment models. | 05 |
| | (c) Describe the method of residuals for determination of absorption rate constant. | 05 |
| Q. 6 | (a) What process of drug ADME are known to show non linearity? Explain giving suitable examples. | 06 |
| | (b) What is extraction ratio? Define clearance, total body clearance and organ clearance. | 05 |
| | (c) Write a note on: Hydrogel. | 05 |
| Q.7 | (a) Define clinical pharmacokinetics. Explain dosage adjustment in patients with renal failure. | 06 |
| | (b) Explain term: Drug interaction. Discuss ADME drug interactions with suitable examples. | 05 |
| | (c) What are loading and maintenance dose? How are they calculated? | 05 |
