

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.

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| 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 clearance. 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 michaelis 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 |
