

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER – VIII • EXAMINATION – WINTER – 2015

Subject Code: 280001

Date: 04/12/2015

Subject Name: Dosage Form Design II

Time: 2.30 PM to 5.30 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) What do you mean by release modulation of an API and why is it necessary in suitable dosage form? **06**
- (b) What biological and physicochemical factors are responsible with their optimum range to design oral controlled DDS? **05**
- (c) Give the example of hydrophilic matrix system and drug release mechanism from it. **05**
- Q.2** (a) Differentiate Novel Drug Delivery System from Conventional Dosage Form. How is it beneficiary to patient? Explain giving illustration **06**
- (b) Enlist the systems designed and developed for oral modified release and describe any one of them in detail. **05**
- (c) Which are the parenteral drug delivery systems? Give the suitable API for novel DDS in parenteral form. **05**
- Q.3** (a) What do you mean by site specific and targeted drug delivery system? Give suitable example describing these systems. **06**
- (b) Differentiate transdermal from transmucosal. Write a note on buccal dosage form. **05**
- (c) Write historical aspects of ophthalmic drug delivery system. Write a note on Occuserts. **05**
- Q.4** (a) How the transdermal patch is being formulated? Explain giving illustrative diagram. **06**
- (b) Differentiate transdermal patch and transdermal film. Which one is used where and when? **05**
- (c) What is GRDDS? What are the important advice for patients taking this dosage form? **05**
- Q.5** (a) How will you estimate loading dose and maintenance dose in sustained release dosage form? **06**
- (b) Write a note on CPOP with suitable API and its release mechanism. **05**
- (c) How will you incorporate nanostructures in suitable dosage form? **05**
- Q. 6** (a) What do you mean by pharmacokinetic models? Discuss its importance and application of it. **06**
- (b) What is apparent volume of distribution? Write an equation to calculate it. **05**
- (c) What do you mean by method of residuals? Draw an illustrative diagram for that. **05**
- Q.7** (a) Define Clinical Pharmacokinetics and Describe scope of it. **06**
- (b) What kind of dosage adjustment are needed in patients with and without renal and hepatic failure? **05**
- (c) What do you mean by combination therapy? What kind of drug interactions are possible, explain giving suitable examples. **05**
