

GUJARAT TECHNOLOGICAL UNIVERSITY**B.Pharm. - SEMESTER- VIII • EXAMINATION – SUMMER-2016****Subject Code: 2280001****Date:28/04/2016****Subject Name: Dosage Form Design II****Time: 10:30 AM to 1:30 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) Discuss the merits and demerits of controlled release dosage forms. **06**
(b) Write in brief the estimation of loading and maintenance dose for a controlled release formulation. **05**
(c) Discuss the factors affecting the design of oral sustained release systems. **05**
- Q.2** (a) Discuss in detail the evaluation parameters for transdermal patches. **06**
(b) Explain Ocusert[®] and Lacrisert[®]. **05**
(c) Discuss the formulation development of osmotic tablets with example. **05**
- Q.3** (a) Enumerate various approaches employed for preparation of targeted drug delivery systems. Discuss any one in detail along with examples. **06**
(b) Discuss Michaelis-Menten equation for nonlinear pharmacokinetics. **05**
(c) Explain top down production of nanoparticles along with examples. **05**
- Q.4** (a) Justify the rationale for gastro retentive drug delivery systems and explain low density approach. **06**
(b) Enumerate various methods for preparation of liposomes. Explain any one of them in detail. **05**
(c) Discuss in brief the cube root dissolution equation for controlled release dosage forms. **05**
- Q.5** (a) Enumerate various approaches for colon targeted delivery of intact molecule. Explain any one of them with example. **06**
(b) Mention the parameters and methods used for evaluation of microspheres. **05**
(c) Comment with reasons **05**
a) Niosomes are more stable than liposomes.
b) Microspheres exhibit all or none phenomena
- Q.6** (a) Discuss Wagner-Nelson and Loo-Riegelman method. **06**
(b) Explain and justify the importance of apparent volume of distribution. **05**
(c) Enumerate the evaluation parameters for parenteral controlled release formulation. **05**
- Q.7** (a) What are pharmacokinetic models? Explain in detail one compartment model. **06**
(b) Write a brief note on pharmacokinetic drug interactions. **05**
(c) Discuss the importance of dosage regimen for patients with renal failure. **05**
