

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
M. PHARM - SEMESTER-I • EXAMINATION – SUMMER -2018

Subject Code: MPH102T**Date: 05/05/2018****Subject Name: DRUG DELIVERY SYSTEM****Time: 02:30PM TO 05:30PM****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 suitable excipients for osmotic drug delivery system. Which API's can be formulated by this approach? Why? **06**
- (b) Discuss feedback regulated drug delivery with examples. **05**
- (c) What is the scope of 3D printing in pharmaceutical science? **05**
- Q.2** (a) List out the factors affecting the designing of oral sustained release drug delivery system and discuss any one in detail to formulate it. **06**
- (b) Discuss details on tailor made drug delivery system. **05**
- (c) Explain details on Bioelectronics medicines. **05**
- Q.3** (a) Discuss about ophthalmic controlled release system. **06**
- (b) What are the limitations of protein drug delivery? Explain with suitable examples. **05**
- (c) Discuss about osmotic dosage forms I) advantages II) mechanism of drug release. **05**
- Q.4** (a) Discuss formulation and evaluation of protein and peptide delivery. **06**
- (b) Discuss approaches for osmotic drug delivery system. **05**
- (c) Discuss limitations of buccal delivery system. Give a detail about mucoadhesive polymers for buccal delivery. **05**
- Q.5** (a) What are the Effective strategies for vaccine delivery? Write regarding storage, delivery, its uptake & risk associated with vaccine delivery. **06**
- (b) Describe recent innovations in GRDDS. **05**
- (c) Discuss the influence of excipients in the formulation of gastro retentive drug delivery systems. **05**
- Q. 6** (a) Which categories of drugs are suitable for GRDDS, Justify? Discuss *in vitro* and *in vivo* evaluations of GRDDS. **06**
- (b) Discuss about Biodegradable polymers used in formulation of controlled drug delivery system. **05**
- (c) Discuss formulation and evaluation of transdermal drug delivery system. **05**
- Q.7** (a) Discuss pH activated, mechanical activated, enzymatic activated in drug delivery system. **06**
- (b) Describe loading and maintenance dose used in controlled release formulation. **05**
- (c) Discuss on dissolution and diffusion controlled release system. **05**