

GUJARAT TECHNOLOGICAL UNIVERSITY
M.PHARM - SEMESTER-1 EXAMINATION – SUMMER-2019

Subject Code: MPH102T**Date: 30/05/2019****Subject Name: Drug Delivery System****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.

- Q.1** (a) Differentiate sustained, controlled and modified drug release giving suitable example. **06**
- (b) Enlist physico-chemical approaches for controlled release formulation and discuss any one in details. **05**
- (c) Enlist advantages and disadvantages of bioelectronic medicines in pharmaceuticals. **05**
- Q.2** (a) Discuss concept of osmotic activated drug delivery system giving suitable examples. **06**
- (b) Enlist advantages and disadvantages of pH activated drug delivery system giving suitable example. **05**
- (c) Discuss mechanism of enzyme activated drug delivery system. **05**
- Q.3** (a) Discuss advantages, disadvantages and applications of gastro-retentive drug delivery system giving suitable example. **06**
- (b) Enlist various drug permeation used in pharmaceuticals and discuss its importance. **05**
- (c) Enlist evaluation parameters of buccal drug delivery system and discuss any two in details. **05**
- Q.4** (a) Enlist advantages, disadvantages and applications of TDDS. **06**
- (b) Discuss any one approach used to prepare TDDS in details. **05**
- (c) Enlist various evaluation parameters of TDDS and discuss any two in details. **05**
- Q.5** (a) Enlist and discuss various applications of protein and peptide drug delivery system giving suitable example. **06**
- (b) Enlist various formulation approaches for macromolecules and discuss any one in details. **05**
- (c) Enlist various evaluation parameters for protein and peptide drug delivery system and discuss any two in detail. **05**
- Q.6** (a) Define loading and maintenance dose and show its calculation to prepare sustained release formulations. **06**
- (b) Discuss diffusion and dissolution controlled release system. **05**
- (c) Discuss any one innovation in ophthalmic drug delivery system in details. **05**
- Q.7** (a) Discuss objectives and applications of vaccine giving suitable example. **06**
- (b) Enlist advantages and disadvantages of 3D printing technology used in pharmaceuticals. **05**
- (c) Discuss telepharmacy. **05**