

GUJARAT TECHNOLOGICAL UNIVERSITY
M.PHARM – SEMESTER– III – EXAMINATION – SUMMER 2017

Subject Code: 930102**Date: 29/04/2017****Subject Name: Novel Drug Delivery System-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.

- Q.1** (a) Define “Polymer”. Discuss important properties of polymers. How does Combination of polymers is useful to have cost effective output of formulation. **06**
- (b) What is IIG? Discuss about impurity profile of excipient/API. How does it affect the stability of dosage form? **05**
- (c) Discuss the prospects of co-processed excipient from compendia point of view with suitable example. **05**
- Q.2** (a) Discuss the polymers useful in in-situ gelling systems. **06**
- (b) Discuss the importance of mol. wt. and t_g of polymers. Discuss about determination of mol. wt. of polymer. **05**
- (c) Describe the mechanisms of biodegradation of polymers. **05**
- Q.3** (a) Which are potential sites for bio adhesion? Draw a classical diagram of BDDS. Write a note on characterization of this system. **06**
- (b) Write a note on release study from strips, diskettes and films. **05**
- (c) What are the modifications of Transdermal drug delivery system? Write a note on suitability of API for this system. **05**
- Q.4** (a) Enlist the materials used in preparation of liposomes. Discuss about characterization of liposomes. How does emulsion can be compared with liposomes? **06**
- (b) Enumerate various types of “-somes” Describe any one of them except liposomes. **05**
- (c) How does nanotechnology applied to Pharma products? Explain application of nano particles and nano emulsions giving examples of their market product. **05**
- Q.5** (a) What is tailor made medicine? Explain biomarker and theranostics with reference to medicines of 2050. **06**
- (b) Enlist methods of spherical crystallization. Discuss any one of them with its application. **05**
- (c) Define super critical fluid. What are challenges to it? Write a note on application of it. **05**

Q. 6	(a)	Briefly explain the concept of PEGylation. Discuss the property alteration of peptide related to performance of PEG and its manufacturing challenges.	06
	(b)	Write a note on problems of protein-peptide DDS. How can it be overcome? Give the list of market products available in this category.	05
	(c)	Write a note on immuno-modulated products.	05
Q.7	(a)	What is a pro-drug? Discuss various strategies and significance of pro-drug as novel DDS.	06
	(b)	How do coated particles help in altering problems creative properties? How are they characterized? Discuss any one method for particle coating technology.	05
	(c)	Enlist biotech products and discuss about stability aspects of these products.	05
