

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy Sem-III Regular Examination January 2011

Subject code: 930102

Subject Name: Novel Drug Delivery System Part-II

Date: 06 /01 /2011

Time: 10.30 am – 01.30 pm

Instructions:

Total Marks: 80

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Which are potential sites and dosage forms for bioadhesion? Draw a general schematic diagram for BDDS and classify them. Write a note on ex-vivo and in-vivo methods to study this system. **06**
- (b) What is SCF? Discuss relative features of micronization by SCF technique and its application in pharma. research. **05**
- (c) Define ‘Polymer’. Describe its properties. **05**
- Q.2** (a) What is in-situ gel? Classify them and suggest its applications. **06**
- (b) Define “Pro-drug” Discuss pathways of them in therapeutics giving suitable examples. **05**
- (c) Classify polymers based on various criteria. **05**
- Q.3** (a) How does particle geometry affect pharma. processing? Discuss conventional and novel technology of spherical techniques in brief. **06**
- (b) What do you mean by intelligent DDS, explain giving suitable illustrations? **05**
- (c) What are the ideal characteristics of biodegradable polymers? Give advantages and disadvantages of biodegradable polymer in pharmaceuticals. **05**
- Q.4** (a) What is PEGylation? How will you optimize manufacturing challenges and medical application of PEG-protein? **06**
- (b) What is diskette? Classify them and discuss in brief the methods to evaluate them. **05**
- (c) What is smart polymer? Discuss in brief giving suitable illustration. **05**
- Q.5** (a) Compare films/strips with TDDS, write an idea about modified TDDS. **06**
- (b) Write a note on γ -DNA technology. **05**
- (c) Discuss the factors affecting degradation behavior of polymers. **05**
- Q. 6** (a) “Proteins and peptides are vulnerable to all sorts of problems those API can face” What are the strategies for oral delivery of protein? **06**
- (b) Enlist materials used in preparation of liposomes. Discuss about lipid characterization and control of liposomes. Compare emulsion with liposome as a system. **05**
- (c) Quantity of polymer can vary 1-70%, ultimate decision is from pharmacist, Comment on regulatory aspect for this. **05**
- Q.7** (a) Write a note on cell and gene therapy products. **06**
- (b) Define nanotechnology and various products prepared by it. Explain application of nanoparticles and nanosuspensions giving examples for their market products. **05**
- (c) What is tailor-made medicine? Explain biomarker and theranostics with reference to medicine of 2050. **05**
