

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy Sem-II Examination July 2010

Subject code: 920102

Subject Name: Novel Drug Delivery System Part-I

Date: 05/07/2010

Time: 11.00 am – 02.00 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) What is gastro-retentive drug delivery? How it can be achieved? Write a note on floating drug delivery system. **06**
- (b) Discuss the rationale underlying the design of gastro retentive dosage forms. What type of GRDDS do you suggest for delivery of Levodopa and diazepam with suitable scientific explanation? Discuss in detail such dosage forms. **05**
- (c) Explain the structure of buccal mucosa. Give a brief account of mucoadhesive polymers for buccal delivery. **05**
- Q.2** (a) Write the rationale behind colon specific drug delivery system. Discuss in brief various approaches used for colonic drug delivery system. **06**
- (b) Enlist the factors to be considered in the design of colon-specific drug delivery system. Discuss about evaluation of colon specific drug delivery system. **05**
- (c) Discuss the merits and demerits of mucoadhesive buccal drug delivery. How one can evaluate mucoadhesive buccal formulation? **05**
- Q.3** (a) Discuss about advances in particle coating technology. **06**
- (b) Enlist recent innovations in advances in capsules. Describe any one in detail. **05**
- (c) Suggest the excipients suitable for osmotic drug delivery system. Which API's can be formulated by this approach? Why? **05**
- Q.4** (a) Which factors are to be considered in selection of glass containers? Describe the test for evaluation of suitability of glass as a container per USP standards. **06**
- (b) What do you mean by AAO recommendations for color coding? Write a note on films, foils and laminates. **05**
- (c) Define pharmaceutical package. Enlist the criteria for selection of package type and packaging material. Classify the packaging materials. **05**
- Q.5** (a) Write a note on child resistant and temper proof packaging. **06**
- (b) Discuss in brief intravaginal drug delivery system. Discuss the advantages and disadvantages of vaginal drug delivery system and enlist the factors affecting vaginal absorption. **05**
- (c) Write a note on erodible ocusert. **05**
- Q. 6** (a) Give commonly used techniques for development of parenteral controlled release formulations. Discuss in detail about dissolution controlled and adsorption type depot formulation. **06**
- (b) What is liposome? Enlist the material used for preparation of liposome. Write about any one method of preparation. **05**
- (c) Write a note on application of nanoparticles. **05**
- Q.7** (a) Discuss the strategies developed for oral administration of drugs through hydrogel designed for controlled release. **06**
- (b) Write a note on hydrophilic contact lenses as an ophthalmic drug delivery system. **05**
- (c) Enlist various approaches employed for taste masking. Explain in detail about chemical approach. **05**
