

GUJARAT TECHNOLOGICAL UNIVERSITY
M. Pharm. – SEMESTER – II • EXAMINATION – SUMMER • 2015

Subject Code: 2920102**Date: 14-05-2015****Subject Name: Novel Drug Delivery System Part-1****Time: 10:30 am - 01:30 pm****Total Marks: 80****Instructions:**

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

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| Q.1 | (a) State the principle of osmotic delivery system with necessary equation and explain the osmotic delivery system for soluble drugs. | 06 |
| | (b) Give a brief account on basic components of osmotic delivery system giving examples for each component. | 05 |
| | (c) Discuss Elementary Osmotic Pump and its modified forms. | 05 |
| Q.2 | (a) What type of drugs is suitable for GRDDS? Mention merits and demerits of GRDDS. | 06 |
| | (b) Give a brief account on dissolution apparatus and modifications made so far to evaluate floating drug delivery systems. | 05 |
| | (c) Enumerate on Non Effervescent type of Single and Multiple floating GRDDS. | 05 |
| Q.3 | (a) Explain the permeability of drugs through buccal mucosa. What are the methods to increase drug delivery via buccal route? | 06 |
| | (b) Discuss the methods to determine mucoadhesion property of formulation. | 05 |
| | (c) Explain the significance of sublingual drug delivery system. How they are evaluated? | 05 |
| Q.4 | (a) Write suitability of Insulin for colonic delivery and adopt required approaches to deliver via colon. | 06 |
| | (b) Write short notes on Pulsincap technology. | 05 |
| | (c) How to evaluate colonic dosage forms? | 05 |
| Q.5 | (a) Discuss the influence of excipients in the formulation of GRDDS. | 06 |
| | (b) Explain in vivo evaluation methods of GRDDS. | 05 |
| | (c) Detail out the release kinetics and the equations to determine the mechanisms of drug release from the modified release dosage forms. | 05 |
| Q. 6 | (a) Define Pharmaceutical package. Enlist the criteria for selection of package type and packaging material. Classify the packaging material. | 06 |
| | (b) Describe different methods of taste masking. | 05 |
| | (c) Write applications of particle coating. | 05 |
| Q.7 | (a) Enumerate dissolution controlled, adsorption, encapsulation and esterification types of DEPOT parenteral formulations. | 06 |
| | (b) Give a detail account on Long acting Penicillin formulation. | 05 |
| | (c) Discuss Gels as novel semi solid delivery system. | 05 |
