

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Pharm- SEMESTER-VIII • EXAMINATION – SUMMER-2016

Subject Code: 2280016

Date: 10/05/2016

Subject Name: Current Advances in Novel Drug Delivery Systems

Time:10:30 am to 1:30 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) | Define Liposomes, classify them (based on structural parameters) and discuss the applications of the same. | 06 |
| | (b) | Discuss Sonication and French Pressure Cell (with the help of diagram) in context to methods of preparation of liposomes. | 05 |
| | (c) | Discuss the problems associated with liposomes drug delivery system. | 05 |
| Q.2 | (a) | Describe in brief the structure of Niosomes. Write about method of preparation of Niosomes. | 06 |
| | (b) | Discuss about the characterization of Niosomes. | 05 |
| | (c) | Write a short note on “formulation of floating microspheres”. | 05 |
| Q.3 | (a) | Discuss solvent evaporation technique for Microspheres. | 06 |
| | (b) | Explain air suspension technique for Microencapsulation | 05 |
| | (c) | Discuss the design of transdermal drug delivery system. | 05 |
| Q.4 | (a) | Define sonophoresis. Differentiate between sonophoresis and iontophoresis. | 06 |
| | (b) | Define Iontophoresis. Discuss advantages, disadvantages, side effects and biomedical applications of the same. | 05 |
| | (c) | Give advantages of using sonophoresis as a physical penetration enhancer. | 05 |
| Q.5 | (a) | Explain in detail evaluation methods for mucoadhesive drug delivery. | 06 |
| | (b) | What is diskette? Classify them and discuss in brief the methods to evaluate them. | 05 |
| | (c) | Discuss about theories related to bioadhesion. | 05 |
| Q. 6 | (a) | Briefly introduce the term nanotechnology. Enlist the commonly used polymers into these products. Discuss any one method of preparation of nanoparticles. | 06 |
| | (b) | Enumerate different parameters and characterization methods for each parameter in context to characterization of Nanoparticulate system. | 05 |
| | (c) | Discuss evaluation parameters for SEDDS. | 05 |
| Q.7 | (a) | Describe formulation for self-emulsifying drug delivery system. | 06 |
| | (b) | Give application of nanotechnology in the field of pharmaceutical science. | 05 |
| | (c) | Discuss pH and Glucose sensitive approaches for In-situ gels. | 05 |
