

GUJARAT TECHNOLOGICAL UNIVERSITY
M. Pharm. - SEMESTER– III • EXAMINATION – WINTER-2016

Subject Code: 930102**Date: 23/11/2016****Subject Name: Novel Drug Delivery System: Part-II****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) Which are the ideal characteristics of biodegradable polymers? Explain their advantages and disadvantages. | 06 |
| | (b) Write a note on polymers as solubilizing agents | 05 |
| | (c) Discuss in detail: SCF technology. | 05 |
| Q.2 | (a) Differentiate strips/diskettes and films from their physical, chemical and therapeutic aspects. | 06 |
| | (b) Describe applications of niosomes as targeted drug delivery system. | 05 |
| | (c) Give pharmaceutical applications of nanoparticles with examples. | 05 |
| Q.3 | (a) What is penetration enhancer? Which formulations require penetration enhancers as excipients? Explain with suitable examples. | 06 |
| | (b) Discuss <i>in vitro</i> and <i>in vivo</i> problems associated with protein and peptide delivery system. | 05 |
| | (c) Explain mechanisms of biodegradation of polymers | 05 |
| Q.4 | (a) Write a note on packaging, handling and evaluation of strips and films. | 06 |
| | (b) Enlist the various methods of preparation for transdermal patch and discuss its evaluation parameters. | 05 |
| | (c) Explain various theories of bioadhesion. | 05 |
| Q.5 | (a) Write a note on immunomodulated molecules. | 06 |
| | (b) Explain in detail on IIG status and Impurity profile. | 05 |
| | (c) Differentiate between sonophoresis and iontophoresis. Give example of drugs suitable for such delivery system with proper justification. | 05 |
| Q.6 | (a) Explain the basis on which polymers form <i>in-situ</i> gel. | 06 |
| | (b) Define Latentiated Drug. Write a note on application of it in therapeutics giving suitable examples. | 05 |
| | (c) Enlist the various methods of preparation of liposomes and discuss its evaluation parameters. | 05 |
| Q.7 | (a) Explain the concept of PEGylations. Discuss in details about its manufacturing challenges. | 06 |
| | (b) Discuss significance of spherical crystallization. Explain methods for spherical crystallization. | 05 |
| | (c) Write a note on tailor made medicine. | 05 |