Seat No.: _____ Enrolment No. _____

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.**

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**

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