Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – III • EXAMINATION – WINTER • 2015

Subject Code: 930102 **Date: 08-12-2015**

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.**

Q.1	**(a)**	Define polymer. Discuss its various applications giving suitable examples.	**06**
	(b)	Enlist and discuss various properties of polymers	**05**
	(c)	Discuss importance of molecular weight and glass transition temperature of polymers and enlist various methods for its determination.	**05**
Q.2	**(a)**	Define and classify liposome. Discuss its various characteristics.	**06**
	(b)	Define Disketts. Discuss in details its evaluations.	**05**
	(c)	Enlist various characteristics, advantages and disadvantages of biodegradable polymers.	**05**
Q.3	**(a)**	Enlist and discuss various theories of bioadhesion.	**06**
	(b)	Discuss polymers used in In situ gels.	**05**
	(c)	Enlist and discuss various applications of Nanotechnology in Pharmaceuticals.	**05**
Q.4	**(a)**	Define Intelligent drug delivery and discuss its various applications giving suitable examples.	**06**
	(b)	Define Neosomes. Differentiate between liposomes and neosomes. Enlist various applications of neosomes in pharmaceuticals.	**05**
	(c)	Write a note on IIG status and Impurity profile.	**05**
Q.5	**(a)**	Write a note on tailor made medicine.	**06**
	(b)	Define films. Enlist and discuss various evaluations parameters for films.	**05**
	(c)	Enlist and discuss various applications of hydrogel in drug delivery system.	**05**
Q. 6	**(a)**	Discuss significance of spherical crystallization. Enlist advantages and disadvantages of spherical crystallization.	**06**
	(b)	Define prodrug. Discuss significance of prodrug in Novel drug delivery system.	**05**
	(c)	Differentiate between sonophoresis and iontophoresis. Enlist drugs suitable for such delivery system.	**05**
Q.7	**(a)**	Define SCF. Discuss its various applications in Pharmaceutical Sciences.	**06**
	(b)	Explain the concept of PEGylations. Discuss in details about manufacturing challenges.	**05**
	(c)	Enlist the importance of protein and peptides in Pharmaceuticals. Discuss *in vitro* and *in vivo* problems associated with such delivery system.	**05**

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