Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – III • EXAMINATION – SUMMER • 2014

Subject Code: 930102 Date: 22-05-2014

Subject Name: Novel Drug Delivery System Part-II

Time: 02:30 pm - 05:30 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)**	Give pharmaceutical applications of polymers with example and discuss in brief about polymer characterization.	**08**
	(b)	Explain Pharmaceutical uses of biodegradable polymers with suitable examples.	**08**
			08
Q.2	**(a)**	Explain different pharmaceutical and pharmacokinetic applications of Prodrug with suitable examples.	**08**
	(b)	Discuss various pharmaceutical applications of nanotechnology with suitable examples.	**08**
			08
Q.3	**(a)**	What are the ideal characteristics of biodegradable polymers? Give advantages and disadvantages of biodegradable polymers in pharmaceuticals.	**08**
	(b)	Why intelligent drug delivery is important in recent Pharmaceutical Market? Give outline to develop this drug delivery with suitable example.	**08**
			08
Q.4	**(a)**	Define PEGylation. How different challenges are overcome by a F and D scientist in handling proteins and peptides to develop dosage form using PEGylation.	**08**
	(b)	What is *in situ* gel? Give various approaches for in situ gelling system with different suitable pharmaceutical dosage forms.	**08**
			08
Q.5	**(a)**	Discuss the critical problems associated with Liposome's drug delivery system.	**08**
	(b)	Differentiate between sonophoresis and iontophoresis. Discuss about drugs used by iontophoretic drug delivery system.	**08**
			08
Q. 6	**(a)**	What is the importance of bioadhesion? SExplain the theories of bioadhesion and enlist the properties of an ideal polymer for muccoadhesive drug delivery system.	**08**
	(b)	Compare films/strips with TDDS, write in details about the need of modified TDDS.	**08**
			08
Q.7	**(a)**	Discuss the issues related to delivery of proteins and peptides. Write a short note on Immunomodulated molecules.	**08**
	(b)	What is SCF? Give its importance and applications in the field of pharmaceutical science.	**08**

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