Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.PHARM - SEMESTER–3 EXAMINATION – SUMMER-2019

Subject Code: 930102 Date: 29/05/2019

Subject Name: Novel Drug Delivery System: Part - II

Time: 02:30 PM TO 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)**	Explain PEGlylation. Give factors affecting performance of PEGlyted peptide. Discuss manufacturing challenges of the same.	**06**
	(b)	Write a note on Immunomodulated molecules. Discuss the issues related to delivery of proteins and peptides.	**05**
	(c)	Write a note on applications of hydrogel in drug delivery system.	**05**
Q.2	**(a)**	Define in-situ gel. Classify them according to its applications.	**06**
	(b)	Differentiate standard and co-processed excipients. Discuss both with suitable example.	**05**
	(c)	What is tailor-made medicine? Explain biomarkers in detail.	**05**
Q.3	**(a)**	Define nanotechnology. List out methods of preparation of nanoparticle and write in detail about any one method.	**06**
	(b)	Discuss films from their physical, chemical and therapeutic aspects.	**05**
	(c)	Write a note on IIG status and impurity profile.	**05**
Q.4	**(a)**	Discuss importance of intelligent drug delivery system. Explain the development of this drug delivery with suitable example.	**06**
	(b)	Write a note on Immunomodulated molecules.	**05**
	(c)	Give pharmaceutical applications of polymers with example and discuss in brief about polymer characterization.	**05**
Q.5	**(a)**	Define Sonophoresis. Give advantages and application of sonophoresis as a physical penetration enhancer.	**06**
	(b)	Write a note on biodegradation of polymers.	**05**
	(c)	Write a note on γ – DNA technology.	**05**
Q. 6	**(a)**	Differentiate Liposomes and Niosomes. Discuss the problems associated with liposomes drug delivery system with possible solutions.	**06**
	(b)	Define SCF. State the challenges of SCF. Write about applications of SCF in pharmaceutical research.	**05**
	(c)	Define disketts. Write a note on ocular disketts.	**05**
Q.7	**(a)**	Describe in brief the structure of Niosomes. Write about method of preparation of Niosomes.	**06**
	(b)	Explain electroosmosis and electrorepulsive with reference to ionophoresis.	**05**
	(c)	Define “Pro-drug”. Write a note on the prodrug approach.	**05**

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