Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Ph. - SEMESTER– VII EXAMINATION – WINTER -2020

Subject Code: BP704TT Date: 08/01/2021

Subject Name: Novel Drug Delivery Systems

Time: 10:30AM To 12:30PM Total Marks: 54

Instructions:

1. **Attempt any THREE questions from Q-1 to Q-6.**
2. **Q.7 is compulsory to attempt.**
3. **Make suitable assumptions wherever necessary.**
4. **Figures to the right indicate full marks.**

Q.1	**(a)**	Write a note on Dissolution and Diffusion controlled release system.	**06**
	(b)	Explain Biological factors affecting the design of oral sustained release drug delivery system.	**05**
	(c)	Briefly describe the importance of various properties of polymers.	**05**
Q.2	**(a)**	What properties are required for the drug to be a candidate for Transdermal drug deliverysystem? Explain formulation of Transdermal drug delivery system.	**06**
	(b)	Describe Microencapsulation technique for particle coating.	**05**
	(c)	Define Muco adhesion. Describe the mechanisms of Bio adhesion.	**05**
Q.3	**(a)**	Discuss limitations of Buccal delivery system. Give a detail about Mucoadhesive polymers for Buccal delivery.	**06**
	(b)	Give on account of approaches for designing of Gasro retentive dosage form.	**05**
	(c)	Discuss in detail the evaluation parameters for Transdermal patches.	**05**
Q.4	**(a)**	Discuss method of preparation of Nano particles.	**06**
	(b)	Classify Liposomes? Why Liposomes are considered versatile carriers for parenteral drug delivery.	**05**
	(c)	Define Neosomes. Differentiate between liposomes and neosomes. Enlist various applications of Neosomes in pharmaceuticals.	**05**
Q.5	**(a)**	Describe the formulation of Nasal sprays. How is it evaluated?	**06**
	(b)	Explain in detail the method of producing Monoclonal antibodies by Hybridoma technology.	**05**
	(c)	Discuss merits, demerits and application of Intra uterine devices (IUDs)	**05**
Q. 6	**(a)**	Discuss challenges of Ocular drug delivery system. Suggest their remedies.	**06**
	(b)	Discuss any one innovation in Implantable drug delivery system in details.	**05**
	(c)	Write a note on Active targeting.	**05**
Q.7	**(a)**	Discuss recent innovations in MDI (Metered dose inhaler) technology.	**06**
		OR	
	(a)	Discuss the formulation development of Osmotic tablets with example.	**06**
		OR	
	(a)	Write a note on evaluation parameters of Liposomes.	**06**

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