Seat No.: _____ Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VIII (NEW) - EXAMINATION – SUMMER 2018

Subject Code: 2183902 Date: 07/05/2018

Subject Name: Nanotechnology for Advanced Drug Delivery Systems

Time: 10:30 AM to 01:00 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

			MARKS
Q.1	**(a)**	Give name of materials useful for visualization of tumor and other diseases.	**03**
	(b)	Define : Nebulizers	**04**
	(c)	Write a short note on Gene delivery method.	**07**
Q.2	**(a)**	Define : Lymphatic Vessels	**03**
	(b)	What do you mean by Small molecule drugs?	**04**
	(c)	Write a short note on pulmonary drug delivery devices.	**07**
		OR	
	(c)	Write a short note on targeting drug delivery in the Lungs.	**07**
Q.3	**(a)**	Define : Metered-dose inhalers.	**03**
	(b)	Explain oral drug delivery.	**04**
	(c)	Explain Drug release mechanisms of for advanced drug carriers.	**07**
		OR	
Q.3	**(a)**	Define Systemic diseases.	**03**
	(b)	Give example of various types of nano carriers for advanced drug delivery.	**04**
	(c)	Write a short note on Delivery of therapeutic enzymes.	**07**
Q.4	**(a)**	Define: Respiratory diseases.	**03**
	(b)	Explain clearance of particles for the lungs.	**04**
	(c)	Write a short note Tissue engineering.	**07**
		OR	
Q.4	**(a)**	Define : Aqueous inclusion	**03**
	(b)	Explain role of aerosol particle size for during drug delivery.	**04**
	(c)	Write a short note on novel application of Nano Immunoliposomes for Cardiovascular System.	**07**
Q.5	**(a)**	Define Aerosol.	**03**
	(b)	Explain rectal drug delivery.	**04**
	(c)	Write a short note on Nanoparticle based targeting drug delivery for the Cardiovascular System.	**07**
		OR	
Q.5	**(a)**	Give name of nanotechnology based various medical instruments used for sensing or treatment.	**03**
	(b)	Explain blood purification in the vicinity of nanotechnology.	**04**
	(c)	Write down main criteria for material selection during advanced drug delivery.	**07**

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