

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI(NEW) – EXAMINATION – SUMMER 2019

Subject Code:2163903

Date:16/05/2019

Subject Name:Nanotechnology and Medicine

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) Define: Magnetic NPS	03
	(b) Give your vision about Gene transfer	04
	(c) Write a short note on Landmarks in the Evolution of Nanomedicine.	07
Q.2	(a) Define : Nano biotechnology	03
	(b) Differentiate: in vivo and vitro	04
	(c) Write a short note on Magnetic Hyperthermia in the vicinity of cancer treatment.	07
	OR	
	(c) Explain: Oil-in-Water (O/W) based Nano capsules with its application in medical field.	07
Q.3	(a) State toxicity associated with Cobalt based magnetic nanoparticles as drug carriers.	03
	(b) Differentiate: Nano capsules and Nano sphere.	04
	(c) Write a short note on Iron oxide based magnetic nanoparticles.	07
	OR	
Q.3	(a) Define: Drug delivery	03
	(b) State biocompatibility issues related to magnetic nanoparticles.	04
	(c) Write a short note on oral rout of advanced drug delivery.	07
Q.4	(a) Define: Encapsulation of drug in the vicinity of advanced drug delivery.	03
	(b) Give advantage pf CAP-PEG-insulin-casein (CAPIC) oral insulin delivery system.	04
	(c) Write a short note on Magnetic radioactive isotope based treatment of cancer.	07
	OR	
Q.4	(a) Give advantage of nanoparticle based drug delivery.	03
	(b) State benefit of dendrimers as drug carriers.	04
	(c) Write short note on fullerene conjugate for intracellular delivery of peptides polymer.	07
Q.5	(a) Define: Drug Carrier	03
	(b) Explain : Characterization of Nano capsules	04
	(c) Write a short on cyclodextrin Nanoparticles for drug Delivery.	07
	OR	
Q.5	(a) State use of polymer nanoparticles as drug carrier.	03
	(b) Write a short note Gold Nanoparticles as drug carrier.	04
	(c) Write a short note on Super Paramagnetic Particles for Drug Delivery	07
