



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**
