

GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject Code: 2183610

Date: 02/05/2018

Subject Name: Nanoscience Technology and Pharmaceutical Packaging
 Technology(Department Elective – X)

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 applications of nanotechnology in pharmaceutical field	03
	(b) Give an account on functions of Packaging Materials	04
	(c) What are gold nanoparticles. Give its applications in detail	07
Q.2	(a) What are the new trends in the Pharmaceutical packaging	03
	(b) How packaging stability studies are undertaken.	04
	(c) Classify glass and write a note on glass as a packaging material.	07
	OR	
	(c) Explain in detail “Top down and Bottom up technology” for nanoparticle generation	07
Q.3	(a) Define Dendrimers and give its applications	03
	(b) Explain the zeta potential and particle size determination for nanoparticles	04
	(c) What are micelles? Give its advantages and applications in the pharmaceutical drug delivery in detail.	07
	OR	
Q.3	(a) Differentiate between nanoparticles & micro particles.	03
	(b) Write a note on mechanical similarity of nanoformulation development.	04
	(c) Explain spray drying method with neat labeled diagram for nanoparticles formulation	07
Q.4	(a) Mention the steps involved in flow of sterility test of packaging materials.	03
	(b) Describe Adhesive materials used in packaging technology	04
	(c) What are the different materials used in blister packaging? Explain the strip Packaging process.	07
	OR	
Q.4	(a) Write a note on metal as packing material.	03
	(b) Define sterilization of packaging materials. What are the physical and chemical factors affecting the sterilization?	04
	(c) Write an account on quality control tests for glass containers	07
Q.5	(a) What are the different culture media used in the sterility test of packaging materials?	03
	(b) Explain briefly the microbial destruction process in sterilization of packaging materials.	04
	(c) Classify the Packaging materials and give brief description on any two of the packaging materials?	07

- Q.5** (a) Define solid lipid nanoparticles & polymeric nanoparticles **03**
(b) Write a note on the transportation test for secondary packaging materials **04**
(c) Describe in detail about the quality control tests used to characterize nanoparticles **07**

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