

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2021****Subject Code:3173910****Date:29/12/2021****Subject Name:Nanotechnology And Sustainable Industry****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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Define the term Nanoscience and Nanotechnology.	03
	(b) Write the Application Of Nanotechnology in Agrifood and Forest Products.	04
	(c) Write The Application And importance of Nanotechnology in Electronics Explain it brief.	07
Q.2	(a) What is Catalysts Explain it.	03
	(b) What do you Know about Photocatalytic Disinfection of Water Explain In short.	04
	(c) Give Application of Nanotechnology Energy Generation and Storage And Explain It.	07
OR		
	(c) What is Solar Reactors and CPC Collectors for Drinking Water Disinfection And explain it.	07
Q.3	(a) Define Photocatalytic Materials.	03
	(b) Explain Nanotechnology in Semiconductor Transistors.	04
	(c) Describe Sustainability Assessment for Life-Cycle Analysis.	07
OR		
Q.3	(a) Define Semiconductor Photocatalysis in Short.	03
	(b) Explain the Mechanism of Photocatalysis.	04
	(c) Write The Notes on Industrial Application of Nanotechnology in Brief.	07
Q.4	(a) Explain Importance of Nanotechnology For Graphene Electronics.	03
	(b) Describe How the Thermal Management in Electronics.	04
	(c) What is the Roll of Nanotechnology Drinking Water and Wastewater Treatment.	07
OR		
Q.4	(a) How Nano technology Useful For Transport Section.	03
	(b) Explain Nanotechnology in Carbon Nanostructures..	04
	(c) How Nanotechnology Enhanced sustainable Agrifood sector By Water Treatment.	07
Q.5	(a) Define the term sensor and Explain it.	03
	(b) What is the Roll Of Nanotechnology in Graphene Electronics.	04
	(c) Write the Importance and Application of Nanotechnology in Aerospace.	07
OR		
Q.5	(a) What is the Need for Safe Drinking Water .	03

(b) Write the Challenges in Nanomaterials for Aerospace With help of Nanotechnology. **04**

(c) Describe the Solar Disinfection of Water in Brief. **07**
