

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2183906****Date:13/05/2019****Subject Name:Industrial Nanotechnology****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
<b>Q.1</b>	(a) What do you mean by Sustainable energy?	<b>03</b>
	(b) Explain: Energy Efficiency.	<b>04</b>
	(c) Write short note on impact of nanotechnology on Textiles Industries.	<b>07</b>
<b>Q.2</b>	(a) Explain role of nanotechnology in the automobile Industries.	<b>03</b>
	(b) What do you mean by Lead Encapsulation?	<b>04</b>
	(c) Write a short note on LEED.	<b>07</b>
<b>OR</b>		
	(c) Write a short note on economic impacts & commercialization of nanotechnology.	<b>07</b>
<b>Q.3</b>	(a) Explain role of thermal barrier and write down name of materials used in it.	<b>03</b>
	(b) Give the use of nanotechnology in Agriculture.	<b>04</b>
	(c) Write short note Nanotechnology in Sports.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) What do you mean by rebound effect?	<b>03</b>
	(b) Write down various applications of Nano clays.	<b>04</b>
	(c) Write a short note on greenhouse gases in the vicinity of nanotechnology.	<b>07</b>
<b>Q.4</b>	(a) Define: Radiant Barriers.	<b>03</b>
	(b) Give the use of nanotechnology in Nano electronics.	<b>04</b>
	(c) Write a short note Carbon Footprint.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Define: Industrial parks.	<b>03</b>
	(b) What do you understand by hybrid wind and solar Energy?	<b>04</b>
	(c) Explain role of nanotechnology in health care.	<b>07</b>
<b>Q.5</b>	(a) Define: Ethical Implications.	<b>03</b>
	(b) What do you mean by waste exchanges?	<b>04</b>
	(c) Write a short note on Nano bank.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) List out the materials used for fire protection.	<b>03</b>
	(b) Write a short note on Nano coating used in industry.	<b>04</b>
	(c) Write down short note on material used in the field of Civil Engineering and Construction.	<b>07</b>

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