

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER - VIII (NEW SYLLABUS) EXAMINATION- SUMMER 2018

Subject Code: 2183906**Date: 02-05-2018****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.

- Q.1** (a) Define: Energy efficiency. **03**
 (b) What do you mean by Radiant Barrier? **04**
 (c) Explain role of nanotechnology in the field of food sector with various applications. **07**
- Q.2** (a) Define: Sustainable Energy **03**
 (b) What do you mean by Lead Encapsulation? **04**
 (c) Explain role of nanotechnology in the field of Security and Defense. **07**
- OR**
- (c) Explain role of nanotechnology in the field of Cosmetic and Health care **07**
- Q.3** (a) Define: Rebound Effect. **03**
 (b) What do you mean by hybrid wind and solar Energy? **04**
 (c) Write a short note on Carbon Foot Print. **07**
- OR**
- Q.3** (a) What do you mean by Alternative Fuel? **03**
 (b) What are the possibilities in the sector of transport to save Energy? **04**
 (c) Write a short note on Building design for energy efficiency. **07**
- Q.4** (a) List the materials, which are suitable for fire protection. **03**
 (b) Write down various applications of Nano clays. **04**
 (c) Write a short note on Nano composite coatings in the vicinity of Nanotechnology. **07**
- OR**
- Q.4** (a) Define: LEC cement **03**
 (b) Explain role of nanotechnology in construction especially in cement. **04**
 (c) Write a short note on Nano composite coatings in the vicinity of Nanotechnology. **07**
- Q.5** (a) Define :Nano economy **03**
 (b) Write down issues associate with Health & Safety with nanotechnology based product. **04**
 (c) Write a short note on Nano-Bank. **07**
- OR**
- Q.5** (a) Define: LEED **03**
 (b) What do you mean by Commercialization of Nanotechnology? **04**
 (c) Write a short note on legal police issues and regulation in the vicinity of patent and trademark. **07**