

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– III (NEW) EXAMINATION – SUMMER 2015

Subject Code: 2133903**Date: 04/06/2015****Subject Name: SYNTHESIS OF NANOMATERIALS-I****Time: 02.30pm-05.00pm****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) Describe the architectural effect on nano length scale. **07**
(b) Describe CVD method for nano metal synthesis. **07**
- Q.2** (a) Describe the growth of nanomaterials by tin plating method. **07**
(b) Explain chemical and physics properties of nanomaterials. **07**
- OR**
- (b) What are nanomaterials? Classify them. **07**
- Q.3** (a) Explain solid-solid reaction in SSR method. **07**
(b) Describe dehydration and decomposition reaction. **07**
- OR**
- Q.3** (a) Explain solid-gas reaction in SSR method. **07**
(b) Why intercalation is important in SSR? Explain it. **07**
- Q.4** (a) Explain Chemical Solution Deposition method. **07**
(b) Write a short note on Preparation of semiconductor by CVD technique. **07**
- OR**
- Q.4** (a) What are Nanotubes? Describe the Nanotubes. **07**
(b) Describe the monolayer and multilayer of thin films. **07**
- Q.5** (a) What is Bottom-up approach for nanomaterial? Explain it. **07**
(b) What is Metal oxide CVD? Explain it. **07**
- OR**
- Q.5** (a) What is the safety issue and precaution of nanomaterial? Describe it. **07**
(b) Write short note on Top-Down approach for nanomaterial. **07**
