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

Subject Code: 2143904 Date:03/06/2015 **Subject Name: SYNTHESIS OF NANOMATERIALS-II** Time: 10:30am-1.00pm **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 (a) Describe the Electron beam lithography 07 Explain pulse laser deposition **07** (a) Describe self-alignment. 07 **Q.2** Write application of pulse laser deposition 07 OR Describe advantages and disadvantages of PLD 07 **Q.3** (a) Explain Self- alignment from vapor (gas) phase. **07 (b)** Explain Self- assembling from solution phase. **07** OR (a) Describe vacuum system for self-alignment. 07 Q.3 **(b)** Describe self-narrowing atomic beam pantography. 07 **Q.4** (a) Explain Physical vapor deposition. 07 What is CVD? Describe it. **(b)** 07 OR (a) Write the advantage and disadvantage of electron beam lithography. **Q.4** 07 **(b)** Describe SPM with electron beam lithography. **07** Q.5 (a) Explain RF plasma chemical method. 07 Write application of RF plasma chemical method. 07 **(b)**

(a) Differentiate PVD and CVD techniques.

Write application of electron beam lithography.

Q.5

(b)

OR

07

07