Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – V (NEW) EXAMINATION – WINTER 2015

Subject Code: 2153901		Date:17/12/2015 Total Marks: 70		
Subject Name: Fabrication of Nano devices Time:10:30am to 1:00pm Instructions:				
	1 2	Attempt all questions.Make suitable assumptions wherever necessary.Figures to the right indicate full marks.		
Q.1	(a) (b)	Write short note on MOS type Gas Sensor. What is Carbon nanotube FET (CNFET)? Describe CNFET.		07 07
Q.2	(a) (b)	Explain Electrochemical type of gas sensor. What are optical nanofibers? Describe its applications for nano d	evices.	07 07
	(b)	OR What is sensor? Mention different applications of sensors.		07
Q.3	(a) (b)	Write warnings and precautions for use of sensor. Explain protein based biosensors.		07 07
Q.3	(a) (b)	OR What are single electron transistors (SETs)? Describe Single electron transistors (SETs)?	ctron transistor.	07 07
Q.4	(a) (b)	What is nano sensor? Describe nanowire sensors. Explain Nano manipulation.		07 07
Q.4	(a) (b)	OR What is tunnel diode? Describe resonant tunneling transistor. Describe nano computers.		07 07
Q.5	(a) (b)	What is Schottky diode? Describe Schottky devices and applicat What is a photonic bandgap crystal? Describe photonic bandgap		07 07
Q.5	(a) (b)	OR Describe ion beam lithography. What are nano robots? Describe nanorobotics.		07 07
