

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III (New) EXAMINATION – WINTER 2018****Subject Code: 2133903****Date: 05/12/2018****Subject Name: Synthesis of Nanomaterials-I****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
Q.1	(a) Define 0-D Nano materials.	03
	(b) Particle is always spherical or not, justify the question.	04
	(c) Define the roll of free carrier gases in evaporation	07
Q.2	(a) Define 2-D Nano materials.	03
	(b) Define Bottom-up approach.	04
	(c) Explain the tin plating technique.	07
	OR	
	(c) Describe Sol-Gel process.	07
Q.3	(a) Define Nano magnets.	03
	(b) Explain Metal CVD	04
	(c) Write a short notes on Nano tubes	07
	OR	
Q.3	(a) Give the name of technique of bottom-up approach.	03
	(b) Explain quantum confinement effect on Nano materials.	04
	(c) Classify Nanomaterials on the basis of shape and size.	07
Q.4	(a) Write examples of 3-D Nano materials.	03
	(b) Explain the use Nano semi-conductive material in electrical industry widely.	04
	(c) Describe Nano crystalline ceramics.	07
	OR	
Q.4	(a) Why we use laser as a prominent source of many synthesis technique.	03
	(b) Discuss the crucial parameter in CVD technique.	04
	(c) How many problem faces CVD, when we talk about the mass production.	07
Q.5	(a) Define 1-D Nano materials	03
	(b) Explain metal Nano particles	04
	(c) Explain top-down approach	07
	OR	
Q.5	(a) Explain decomposition.	03
	(b) Describe the properties of thin film	04
	(c) Is thin film faces the problem of brittleness or ductility with reference to size reduction? Give the answer in yes or no with perfect reason.	07
