

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VII (NEW) EXAMINATION – WINTER 2020****Subject Code:2173903****Date:25/01/2021****Subject Name:Thin Film Technology****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Define: Physical Vapour Deposition.	03
	(b) Explain Applications of Thin Film in Medical Field in the vicinity of nanotechnology.	04
	(c) Write a Short note on Thin Films.	07
Q.2	(a) Define: Profilometer.	03
	(b) Define Nucleation and types of Film Growth.	04
	(c) Write a Short note on CVD and its Subtypes.	07
Q.3	(a) Write down Applications of Thin Film in Defense.	03
	(b) Mention and Describe Briefly Role of Thin Films in Devices. (Any Four)	04
	(c) Write a short note on Sol-Gel Synthesis for Thin film Growth and hence explain Dip Coating, Spin Coating and Spray Coating.	07
Q.4	(a) Define: Ion Implantation Method.	03
	(b) Explain XRD Characterization for Thin Films.	04
	(c) Compare: MBE and PLD technique.	07
Q.5	(a) Write down applications of Thin Film in Sports Field.	03
	(b) Explain: Structural Properties of Thin Film.	04
	(c) How one can characterize electrical Properties of Thin Film? Describe Technique in Detail.	07
Q.6	(a) Define: Cathodic Arc Deposition.	03
	(b) What do you Understand by SQUID how can we use it for Thin Film Characterization.	04
	(c) Explain Sputtering deposition and its Types.	07
Q.7	(a) Define Role of Thin Films in Semiconductor Industry.	03
	(b) Describe Magnetic and Optical Properties of Thin Films.	04
	(c) Explain fundamentals of Thin Film and Hence Explain Any Three Synthesis Technique.	07
Q.8	(a) Draw Setup of Four Probe Method with its components name.	03
	(b) Explain UV-Vis Spectroscopy for Thin Film Analysis.	04
	(c) Describe Electronics and Automobile Applications of Thin Films.	07
