Seat No.: _____ Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER–VII (NEW) EXAMINATION – WINTER 2020

Subject Code:2172308 **Date:28/01/2021**

Subject Name:Speciality Plastics & applications

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 high performance plastics with examples.	**03**
	(b)	Write down unique properties of thermotropic LCP.	**04**
	(c)	What do you mean by sterilization? Write down various types sterilization method in brief.	**07**
Q.2	**(a)**	Write down the properties and applications of polyamides (Nylon 6).	**03**
	(b)	Write down the structure, properties and applications of ABS.	**04**
	(c)	Write down preparation, properties and applications of PEEK.	**07**
Q.3	**(a)**	Explain the term antimicrobial additives. Why they are used in medical devices? Give examples of antimicrobial additives.	**03**
	(b)	Define the term bio compatibility. Why it is important in medical device?	**04**
	(c)	Write down structure, properties and applications of PAI.	**07**
Q.4	**(a)**	What are the requirements of plastics to be used in aerospace applications?	**03**
	(b)	What are nano additives? Write down the function of nano additives.	**04**
	(c)	Draw the structure, properties and applications of PES.	**07**
Q.5	**(a)**	Define conductive filler with examples.	**03**
	(b)	Write short notes on joining and welding.	**04**
	(c)	Write down preparation, properties and applications of Poly carbonate (PC).	**07**
Q.6	**(a)**	Write down properties and applications of PVC.	**03**
	(b)	Write short notes on radio opaque additives.	**04**
	(c)	Write down the preparation, properties and applications of Polyurethane (PU).	**07**
Q.7	**(a)**	What is the function of stabilizer? Write few examples heat and UV stabilizer.	**03**
	(b)	Write a short notes on i)USP class VI ii) ISO 10993.	**04**
	(c)	Write down preparation, properties and applications of Epoxy Resin	**07**
Q.8	**(a)**	List the names of plastics and its applications in marine industry.	**03**
	(b)	Write down the properties and applications of polychlorotrifluoro ethylene (PCTFE).	**04**
	(c)	Write down the structure, properties and applications of PPS.	**07**

****