Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI(NEW) EXAMINATION – WINTER 2022

Subject Code:3161922 Date:17-12-2022

Subject Name:Advanced Manufacturing Processes

Time:02:30 PM TO 05:00 PM Total Marks:70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			Marks
Q.1	**(a)**	Explain the need of Unconventional Machining Processes.	**03**
	(b)	Write the classification of Thermal Based Processes.	**04**
	(c)	Explain AJM Process in detail with neat diagram.	**07**
Q.2	**(a)**	Write the function of Maskant in CHM Process.	**03**
	(b)	Write difference between Conventional and Non-Conventional Machining Processes in detail.	**04**
	(c)	Explain LBM Process in detail with neat diagram.	**07**
		OR	
	(c)	Explain PAM Process in detail with neat diagram.	**07**
Q.3	**(a)**	Write applications of AWJM Process.	**03**
	(b)	Draw Ishikawa Cause and Effect Diagram for USM Process.	**04**
	(c)	Explain EDM Process in detail with neat diagram.	**07**
		OR	
Q.3	**(a)**	What is the use of Intensifier in WJM Process?	**03**
	(b)	Explain the effect of process parameters on MRR in AJM Process.	**04**
	(c)	Draw Ishikawa Cause and Effect Diagram for EDM Process.	**07**
Q.4	**(a)**	What is the need of Rapid Prototyping?	**03**
	(b)	Write difference between Additive Manufacturing and Subtractive Manufacturing in detail.	**04**
	(c)	Explain FDM Process in detail with their advantages, disadvantages, and applications.	**07**
		OR	
Q.4	**(a)**	Write disadvantages of Rapid Prototyping.	**03**
	(b)	Write advantages, disadvantages, and applications of SLA Process.	**04**
	(c)	Explain LOM Process in detail with their advantages, disadvantages, and applications.	**07**
Q.5	**(a)**	What are functions of Matrix in Composite Materials.	**03**
	(b)	Write the limitations of Composite Materials.	**04**
	(c)	Explain Filament Winding Process with neat sketch.	**07**
		OR	
Q.5	**(a)**	Draw Process Flow Diagram for Glass Manufacturing.	**03**
	(b)	Explain Continuous Glass Fibers Process with neat sketch.	**04**
	(c)	Explain Soda Lime Glass in detail.	**07**

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