Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VIII (NEW) - EXAMINATION – SUMMER 2018

Subject Code: 2181921 Date: 09/05/2018

Subject Name: Design for Manufacturing and Assembly(Department Elective III)

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)**	What is manufacturability?	**03**
	(b)	What is DFMA? Why is it implement?	**04**
	(c)	What is Geometrical Tolerancing? Draw the Symbols used for Form tolerance & Orientation tolerance.	**07**
Q.2	**(a)**	What is machinability?	**03**
	(b)	How will you determine optimum number of cavity?	**04**
	(c)	Explain the basic design rules of form design of forging.	**07**
		OR	
	(c)	What are the reason claimed for not implementing DFMA?	**07**
Q.3	**(a)**	How to calculate die casting cycle time?	**03**
	(b)	Enlist any five design features for machining.	**04**
	(c)	Illustrate casting design rules to produce a sound casting with lowest cost.	**07**
		OR	
Q.3	**(a)**	What is ‘hot spot’ in the casting?	**03**
	(b)	Illustrate with suitable example to obviate cores.	**04**
	(c)	Explain design for clampability and accessibility.	**07**
Q.4	**(a)**	List the recommendations to be considered for the design of assembly.	**03**
	(b)	Explain how group technology is helpful in DFMA.	**04**
	(c)	Explain design rules for part separation.	**07**
		OR	
Q.4	**(a)**	Enlist any three design rules for parts consolidation.	**03**
	(b)	How to identify uneconomical design?	**04**
	(c)	Explain the design guidelines for machining of rotational and non-rotational parts.	**07**
Q.5	**(a)**	Name few design method for reducing environmental impact.	**03**
	(b)	What is green economy?	**04**
	(c)	Discuss the economics of recycling.	**07**

OR

Q.5	**(a)**	Discuss the local and regional issues influencing design for environment.	**03**
	(b)	Name few hazardous material used in product and their impact in environment.	**04**
	(c)	Explain product life cycle management.	**07**

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