Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER - VII EXAMINATION – WINTER 2014

Subject Code: 173404 **Date:02/12/2014**

Subject Name: Design for Manufacture, Assembly and Environment

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.**

Q.1	**(a)**	Explain the influence of geometric tolerances in DFMA.	**07**
	(b)	Write about selection of product material.	**07**
Q.2	**(a)**	Explain the basic design rules of form design of forging.	**07**
	(b)	Discuss in detail about mechanism selection and evaluation method adopted in design.	**07**
		OR	
	(b)	How to explore the design alternatives? Explain.	**07**
Q.3	**(a)**	Explain the factors influencing form design of welded members.	**07**
	(b)	Discuss the design rules for drilled holes and turned parts.	**07**
		OR	
Q.3	**(a)**	Illustrate with suitable examples and sketches to obviate cores.	**07**
	(b)	Explain design for machinability and design for economy.	**07**
Q.4	**(a)**	Explain the design rules for parts consolidation.	**07**
	(b)	Write about the identification of uneconomical design. Explain how it can be modified.	**07**
		OR	
Q.4	**(a)**	Discuss the computer applications for DFMA.	**07**
	(b)	Explain about the required designer qualities.	**07**
Q.5	**(a)**	Write about various stages of LCA.	**07**
	(b)	Explain the design for minimum material usage.	**07**
		OR	
Q.5	**(a)**	Discuss about the design methods for reducing environmental impact.	**07**
	(b)	Explain design for disassembly and design for remanufacture.	**07**

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