

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2181921****Date:20/05/2019****Subject Name:Design For Manufacturing And Assembly****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
<b>Q.1</b>	(a) What are the factors considering while selecting a mechanism for particular product?	<b>03</b>
	(b) Differentiate Feature Tolerances and Geometric Tolerances with its importance in Design of product.	<b>04</b>
	(c) What is Geometrical Tolerancing? Draw the Symbols used for Form tolerance & Orientation tolerance.	<b>07</b>
<b>Q.2</b>	(a) Discusses the Influence of materials on form design.	<b>03</b>
	(b) How the Materials varieties and form design affects the Manufacturing.	<b>04</b>
	(c) Explain the Form Design of Forging with suitable example.	<b>07</b>
<b>OR</b>		
	(c) With Suitable Sketch, Discuss the basic Rules for Form Design of Castings.	<b>07</b>
<b>Q.3</b>	(a) Define the machinabilities. How it can be improve?	<b>03</b>
	(b) How “simplification by separation” principle affects the design of product? Explain.	<b>04</b>
	(c) Discuss Design features to facilitate Drill.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Discuss the relationship between “Design For Economy” and “Design For Machining”.	<b>03</b>
	(b) Machinability does not depends on (a) Micro structure of the work material, (b) Operator Skill. True or False? Justify	<b>04</b>
	(c) Discuss Design features to facilitate milling Cutter.	<b>07</b>
<b>Q.4</b>	(a) Discuss with suitable example to obviate cores.	<b>03</b>
	(b) Explain how group technology is helpful in DFMA.	<b>04</b>
	(c) List the factors on which the types of patterns depend for the design of casting	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) What is DFMA? Why is it implementing?	<b>03</b>
	(b) List out Casting Defects. Explain Shrinkage with its impact on Design of casting.	<b>04</b>
	(c) Explain about all the rules to be followed in designing a casting.	<b>07</b>
<b>Q.5</b>	(a) What is Design for Environment? Explain Briefly.	<b>03</b>
	(b) What is green economy?	<b>04</b>
	(c) Explain Weighted sum assessment method with suitable example.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) Discuss the local and regional issues influencing design for environment.	<b>03</b>
	(b) Discuss guidelines for DFE	<b>04</b>
	(c) Discuss the economics of recycling	<b>07</b>

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