

Seat No.: _____

Enrolment No. _____

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