

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**
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|------------|--|-----------|
| (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 |
