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

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 153402 **Date: 05/05/2017**

Subject Name: Computer Aided Design and Analysis

Time: 02:30 PM to 05:00 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)**	Compare surface modeling with solid modeling.	**07**
	(b)	Write about various CAD data exchange standards.	**07**
		OR	
Q.2	**(a)**	What is CAD? Explain the applications and advantages.	**07**
	(b)	Explain various solid modeling techniques.	**07**
		OR	
	(b)	Explain the product design process.	**07**
		OR	
Q.3	**(a)**	What are the types of surfaces used in CAD system?	**07**
	(b)	Explain the difference between cubic spline and Bezier curve.	**07**
		OR	
Q.3	**(a)**	Explain various types of elements used in FEA.	**07**
	(b)	Explain the types of post-processors.	**07**
		OR	
Q.4	**(a)**	Explain the application of FEA in manufacturing engineering.	**07**
	(b)	Write about the general finite element analysis procedure.	**07**
		OR	
Q.4	**(a)**	Explain about fully automatic mesh generation methods.	**07**
	(b)	Write about top-down and bottom-up modeling methodologies.	**07**
		OR	
Q.5	**(a)**	Explain the mesh requirements in FEA.	**07**
	(b)	Explain the problem solving methodology in FEA.	**07**
		OR	
Q.5	**(a)**	Explain the types of coordinate systems with neat sketches.	**07**
	(b)	Explain Boolean operations with neat sketches.	**07**

****