Seat No.:	Enrolment No.
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-V • EXAMINATION - WINTER • 2014** 

	•	Code: 153402 Date: 28-11-2014 Name: Computer Aided Design and Analysis	
Ti	me: 1 tructio 1. 2.	0.30 am - 01.00 pm Total Marks: 70 ons: Attempt all questions.	
Q.1	(a) (b)	Explain the types of geometric modeling techniques.  Write in detail about kinematic analysis and its applications.	07 07
Q.2	(a) (b)	Discuss the product design life cycle.  Explain the difference between cubic spline and Bezier curve.  OR	07 07
	<b>(b)</b>	Write about transformations.	07
Q.3	(a) (b)	List the advantages of computer aided design.  What is meant by Interactive Graphics? Explain its various elements.  OR	07 07
Q.3	(a) (b)	What is the role of primitives and Boolean operations in CSG? Explain with suitable examples.  What are the types of surfaces used in CAD system?	
Q.4	(a) (b)	Explain design by features.  Write the general procedure for FEA problems.  OR	07 07
Q.4	(a) (b)	Discuss about different types of elements used in FEM. Explain various solution techniques in FEM.	07 07
Q.5	(a)	Discuss the advantages and disadvantages of finite element method over	07
	<b>(b)</b>	conventional methods.  How to minimize the errors in FEA? Explain.  OR	07
Q.5	(a) (b)	What are shape functions? Discuss their properties.  Discuss how finite element method is evolved in the engineering field.	07 07

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