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Uni. Roll No. ….....

Program/Course: M. Tech. (Structural Engineering)

Subject: Computer Aided Design Methods

Subject Code: CE-507

Paper ID: E0854

Time Allowed: 03 Hours Max. Marks: 100

Note:

1. Attempt any five questions.

Q1.	a)	What is CAD and how it is benefitting Engineering Design?	10
	b)	Enlist computer hardware, peripherals, software (type/category with possible name) for a typical Structural Engineering Office.	10
Q2.		What do you understand by Transformation in case of modelling in CAD. Explain any four with the help of examples.	20
Q3.		What is 'Scan Conversion'? Name at least three such algorithms, in case of a “Line” and explain any one in detail?	20
Q4.	a)	How 3-D objects are modelled in Computers?	8
	b)	What do you understand by shading and rendering, and how it is achieved?	12
Q5.	a)	How raster graphics differ from vector graphics. Discuss their application and suitability.	5
	b)	Discuss 5 input devices with their advantages and limitations.	15
Q6.		How joints, members, joint type/conditions, and loading is represented for analysis purpose, in computer program or software. Explain with the help of suitable example.	20
Q7.	a)	Draw flow chart to design a singly reinforced simply supported beam.	10
	b)	Write a computer program for the design problem of 7(a), in computer language of your choice.	10
Q8.	a)	Why databases are used in Engineering Design? Name at least three DBMS software.	10
	b)	What are the various database models, popularly used in DBMS, and discuss their suitability.	10

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