PMC TECH
INSPIRE TO INNOVATE

Er. PERUMAL MANIMEKALAI COLLEGE OF ENGINEERING

Accredited by NAAC ('A' Grade) & NBA (B.E. - CSE | ECE | EEE | MECH & B.TECH. - IT)

AN AUTONOMOUS INSTITUTION

Internal Assessment Test – I
SET A

IV SEMESTER - B.E. CIVIL ENGINEERING
PUCE4PC07 – STRUCTURAL ANALYSIS

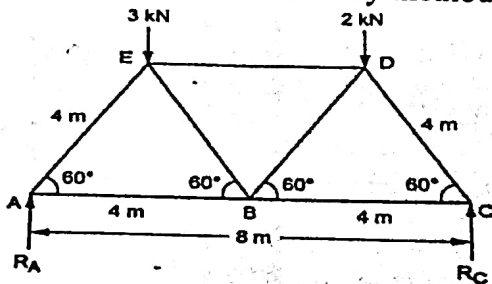Duration: 1.30 hours

Maximum: 50 marks

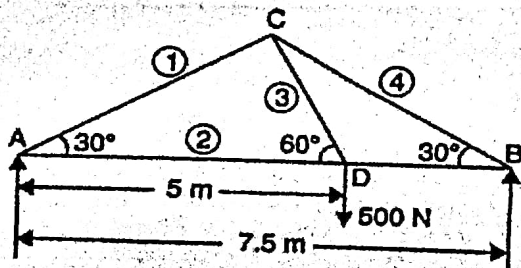| PART – A (5 x 2 = 10 marks) Answer ALL questions	CO No.	Bloom's Cognitive Level
1. What is determinate and indeterminate trusses?	CO1	Remember
2. What are the methods available to analyze the determinate trusses?	CO1	Remember
3. Write the applications of space trusses.	CO1	Remember
4. Mention any two assumptions made in slope deflection method.	CO2	Remember
5. What is meant by stiffness factor?	CO2	Remember

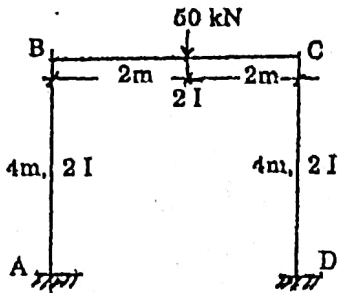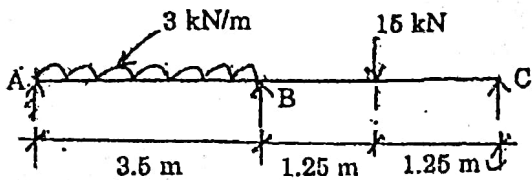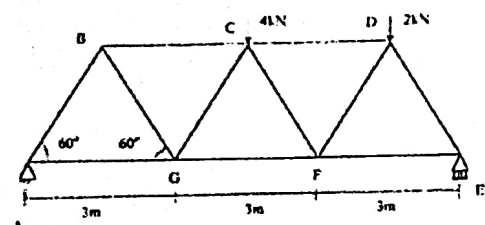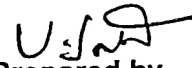| PART – B (2 x 16 = 32 marks) (1 x 8 = 8 marks) Answer ALL questions		Marks	CO No.	Bloom's Cognitive Level
6.(a)	A truss of 8m span consisting of seven members each of 4m length supported at its ends and loaded as shown in Fig. Determine the forces in the members by method of joints.	16	CO1	Analyze
	Or			
6.(b)	Analyze the given frame shown in Fig. by tension coefficient method.	16	CO1	Analyze

		16	CO2	Analyze
	Analyze the portal frame ABCD shown in Fig. by Slope Deflection Method. Take EI = Constant.			

Or

7.(b)	Analyze the continuous beam ABC shown in Fig. by Moment Distribution Method.. Take EI = Constant.	16	CO2	Analyze

8.(a)	Find the forces in the member AB, AG and BG by method of joints.	8	CO1	Analyze

Or

8.(b)	Find the forces in the members CD and CF and FD shown in above question by method of tension coefficient.	8	CO1	Analyze