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Total No. of Pages : 03

Total No. of Questions : 09

**B.Tech (Civil) (Sem.-5)**  
**STRUCTURAL ANALYSIS-II**  
Subject Code : CE-305  
M.Code : 56022

Time : 3 Hrs.

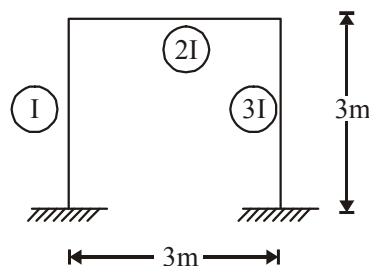
Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A****1. Write briefly :**

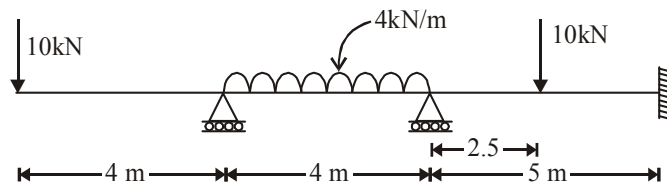
- a) What is static Indeterminacy?
- b) Give two advantages of fixed Beams.
- c) What is an Influence Line ?
- d) Define Distribution factor.
- e) What is the difference between absolute and relative stiffness.
- f) Write any two assumptions of Cantilever Method.
- g) What is lack of fit in a truss?
- h) Determine sway factor for a frame shown

**Fig.1**

- i) What are equilibrium conditions of a space truss?
- j) What do you mean by yielding of supports?

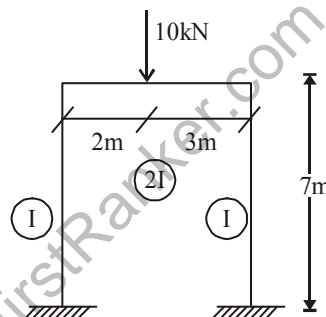
### SECTION-B

2. Using Method of Least work, determine the moment at fixed end of a propped cantilever beam subjected to udl throughout the span.
3. Analyse the continuous beam shown in figure using Clapeyron's Theorem



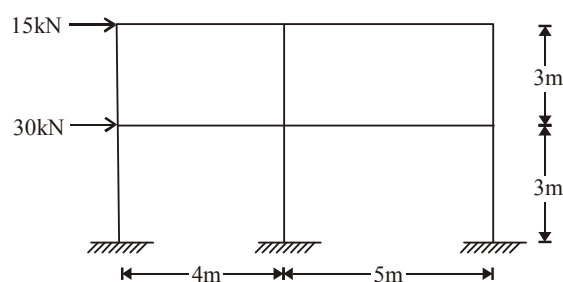
**Fig.2**

4. Analyse the frame using Moment Distribution Method.



**Fig.3**

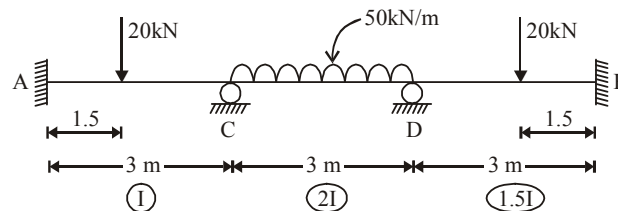
5. What are the advantages/disadvantages of Kani's Method over Moment Distribution Method.
6. Analyse the frame using Cantilever Method.



**Fig.4**

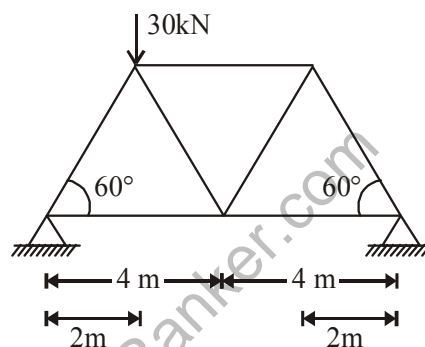
**SECTION-C**

7. Using Slope Deflection Method, determine the support moments for the continuous beam shown Draw BMD & SFD.



**Fig.5**

8. Using method of Tension coefficients, find the bar forces in the truss.



**Fig.6**

9. Draw Influence Line for shear force at a section 2m from right hand support of a simply supported beam having 8m span. Determine value of SF when a udl 5m long is placed with its one end 1 m from left hand support.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**