Mid-West University
Examinations Management Office
Semester End Examinations 2081

Bachelor level/ B.E. Civil/ 5th Semester
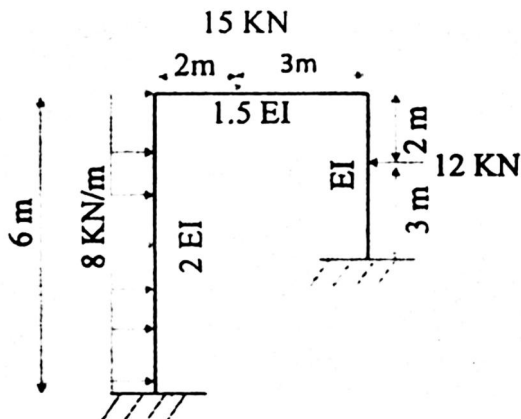Time: 3 hours
Subject: Theory of Structures II (CE451/CE314)
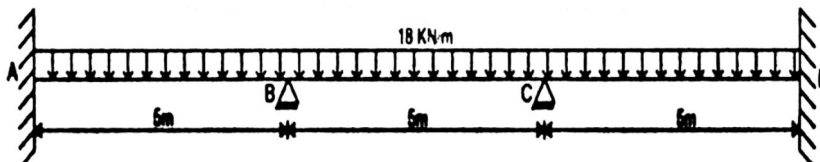
Full Marks: 50
Pass Marks: 25

- *Attempt all the questions*
- *Figures in the margin indicate full marks.*
- *Assume suitable values, with a stipulation, if necessary.*
- *Candidates are required to answer the questions in their own words as far as possible.*
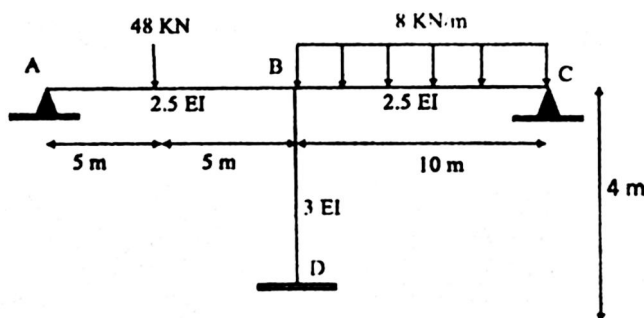
1. Describe types of structural Indeterminacy. Also write its physical meanings [2+2]

2. Describe Castigliano's theorem. [4]

3. What do you mean by the Force method? Explain. Find the reaction component using the force method and draw a bending moment diagram of the given frame. [3+8]
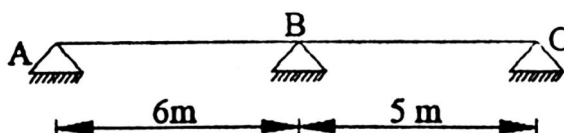

4. Analyze the given frame using the slope deflection method and draw a bending moment diagram. [5]

5. Analyze the given frame using the moment distribution method. [6]
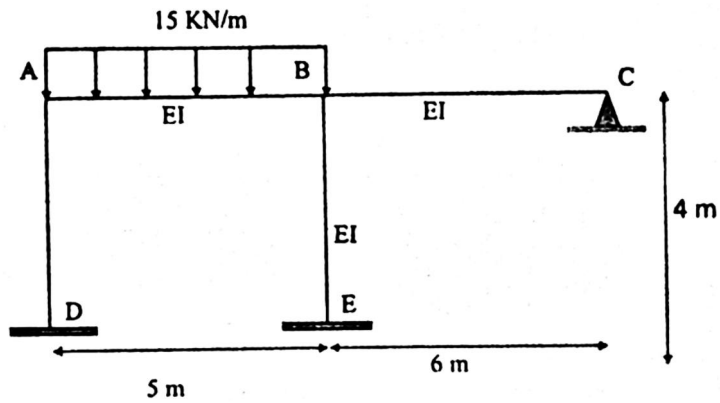

6. Compute the ordinate of ILD for reaction R_A for the beam shown in the figure and draw ILD. At 2 m interval for portion AB and 1 m interval for portion BC. Take EI= Constant. [5]
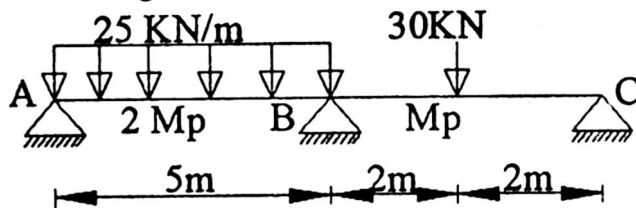
7. Using the stiffness matrix method analyze the give frame. Take EI= Constant   [10]

8. Calculate the plastic moment capacity required for the continuous beam with working loads   [5] shown in figure below

The End