

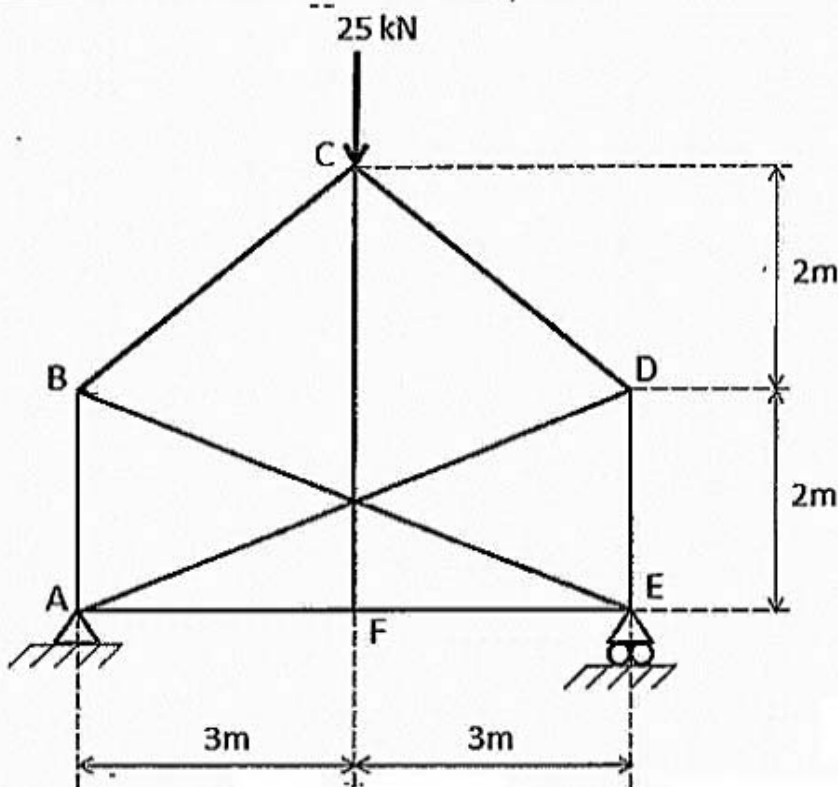
Name of the Examination: B.E. CIVIL ENGINEERING
Subject : STRUCTURAL MECHANICS II

PART-I

Full Marks: 60

Instructions:

- | | |
|----|--|
| I | All notations represent their standard relevant meaning. |
| II | If you feel that any data or condition is/are missing in any question, please assume relevant inputs and mention the same. |

Sl No	Question	Marks
1	 <p style="text-align: center;"><u>Figure: 01 (No Scale)</u></p> <p>Consider the truss from Figure: 01 where the joints of the truss A,B,C,D,E & F are shown and determine all the member forces and mention the same with the figure with proper notations showing the nature of member forces.</p>	20

2

20

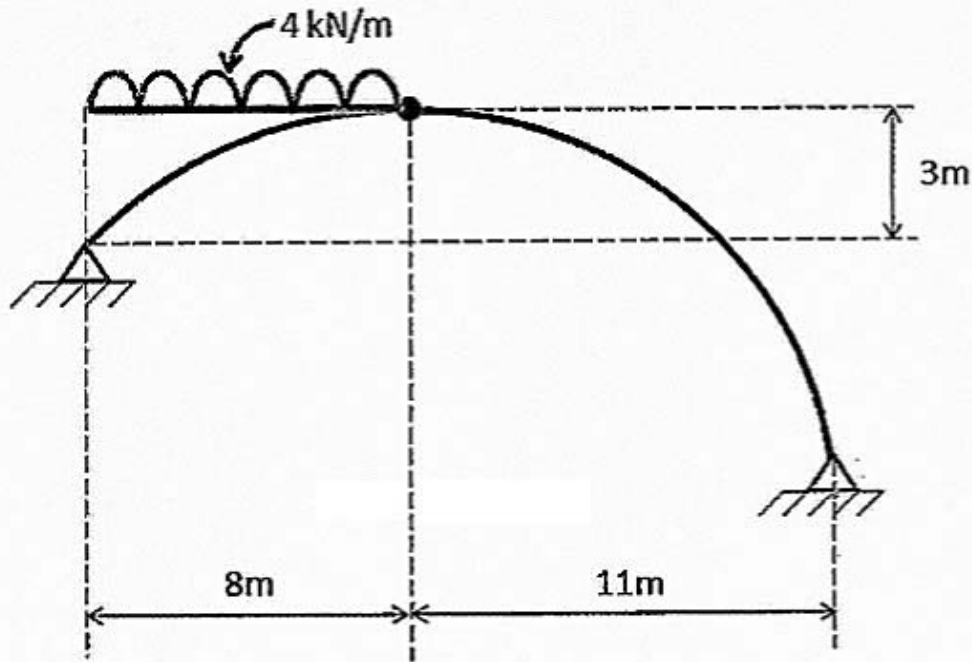


Figure: 02 (No Scale)

Consider the 3 hinged parabolic arch with supports at different levels from Figure: 02 and determine bending moment, normal thrust and radial shear at a point on the arch which is located at distance 5m from the left support.

3

20

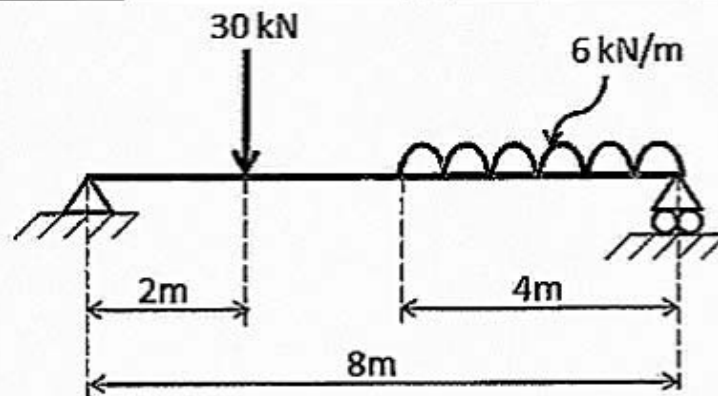


Figure: 03 (No Scale)

Consider the simply supported beam from Figure: 03 and

- Draw Influence Line Diagram (ILD) for reaction forces. Also determine the amount of reaction forces using the diagrams. (Marks: 2.5+2.5+3)
- Draw ILD for shear force at a point on the beam 3m from the left support. Determine the amount of shear force on that point using the ILD. (Marks: 3+3)
- Draw ILD for bending moment at a point on the beam 1m right from the right support. Determine the amount of bending moment at that point using the ILD. (Marks: 3+3)

B.E. CIVIL ENGINEERING SECOND YEAR SECOND SEMESTER EXAM 2022

Subject: STRUCTURAL MECHANICS II

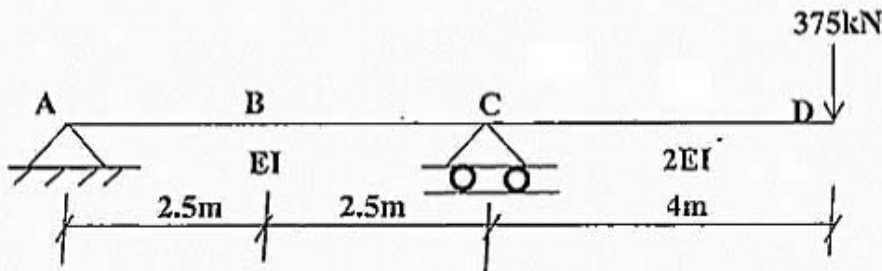
Full Marks:100

Time: 3hours

(Use Separate Answer scripts for each Part)

Part- II (Marks.40)

1. Find slope and deflection at point B and D. Use conjugate beam method. (15)



2. Determine the bending moment at different locations of the continuous beam shown below. Also draw the bending moment and shear force diagrams. Use Three moments theorem. (25).

