INTERNATIONAL CENTRE FOR APPLIED SCIENCES
MAHE, MANIPAL

B.Sc. (Applied Sciences) in Engg.

End – Semester Theory Examinations – May 2021

IV SEMESTER – ANALYSIS OF INTERMIDIATE STRUCTURES [ICE 245]

(Branch: CIVIL)

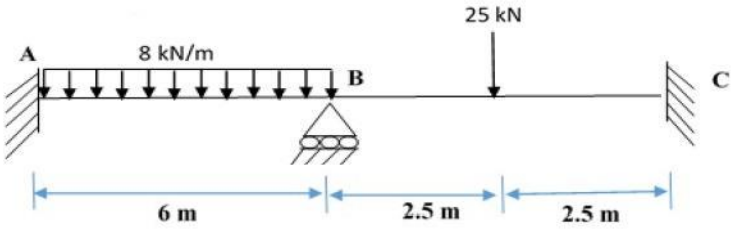
Time: 3 Hours **Date: 21 May 2021** **Max. Marks: 50**

- ✓ **Answer ALL the questions.**
- ✓ **Missing data, if any, may be suitably assumed**

1. A two hinged arch of span 30 m and central rise of 6 m is loaded with UDL of 10kN/m, on its left half-span. Determine normal thrust and radial shear at 5 m from left support.

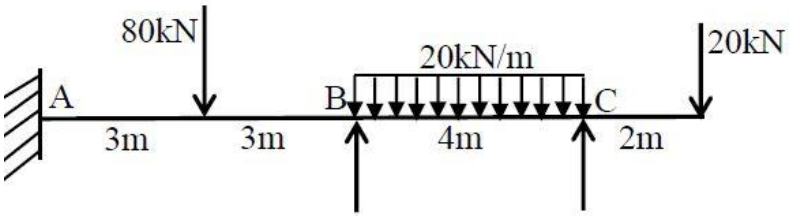
(10)

2. Analyze the continuous beam shown in the Figure, using Clapeyron's Three moment theorem, when support B sinks by 8 mm. Take EI= 4000 kN/m^2. Draw BMD



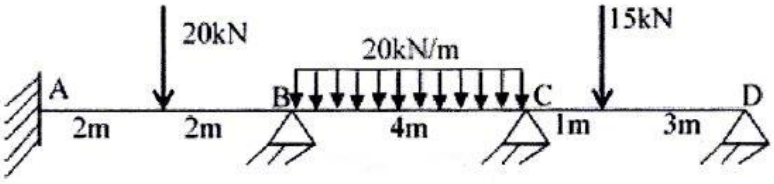
(10)

3. Using Slope deflection method, obtain the end moments for the beam shown in Figure. EI is constant throughout. Draw BMD



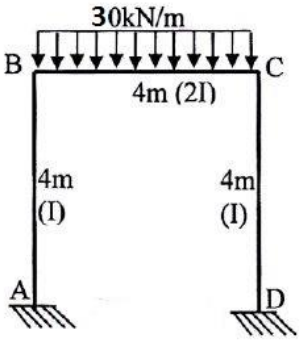
(10)

4. Using the Moment Distribution method, determine the end moments for the continuous beam shown in the Figure. Draw the BMD & SFD.



(10)

5. Obtain the end moments for the frame shown in Figure, by Kani's method. Draw BMD & SFD



(10)

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