Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING
END TERM EXAMINATION - JAN 2023

Semester : Semester V - 2020
Course Code : CIV3002
Course Name : Sem V - CIV3002 - Analysis of Indeterminate Structures
Program : B.Tech. Civil Engineering

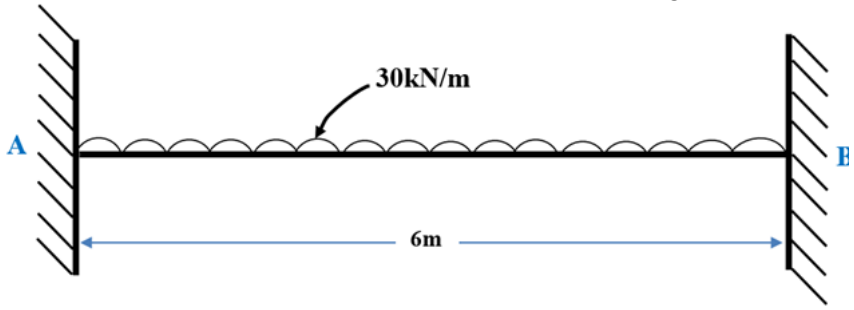
Date : 9-JAN-2023
Time : 9.30AM - 12.30PM
Max Marks : 100
Weightage : 50%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.

PART A

ANSWER ALL THE FIVE QUESTIONS **5 X 2 = 10M**

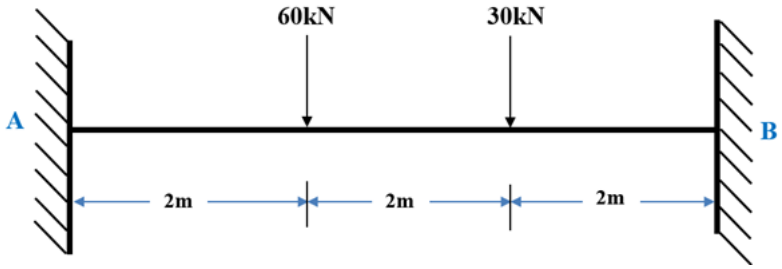
1. The Fixed end moment at B for the beam shown in fig is _____ kN-m.



a) -60
b) 60
c) 90
d) -90

(CO1) [Knowledge]

2. The Fixed end moment at A for the beam is _____ kN-m.



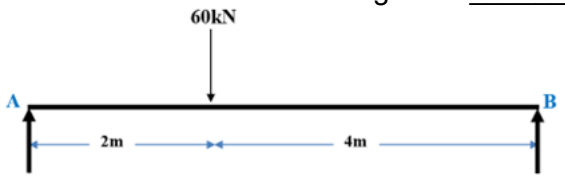
a) 62.66 (CO1) [Knowledge]

b) 72.66

c) 36.66

d) 26.66

3. The support reaction A for the beam shown in figure is _____ kN



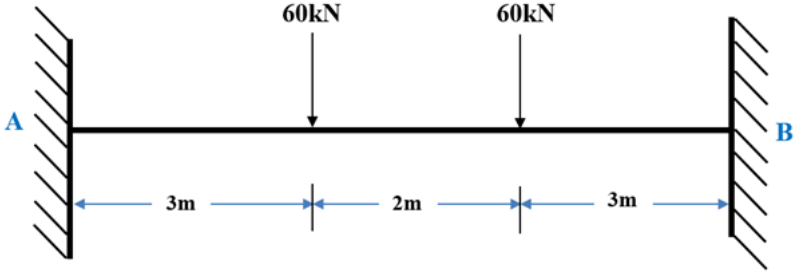
a) 20 (CO1) [Knowledge]

b) 30

c) 40

d) 50

4. The Fixed end moment at A is _____ kN-m.



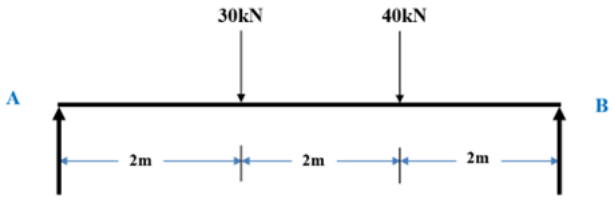
a) -112.5 (CO1) [Knowledge]

b) -121.5

c) -151.5

d) -141.5

5. The support reaction B for the beam AB shown in the figure below is _____ kN



a) 36.66 (CO1) [Knowledge]

b) 46.66

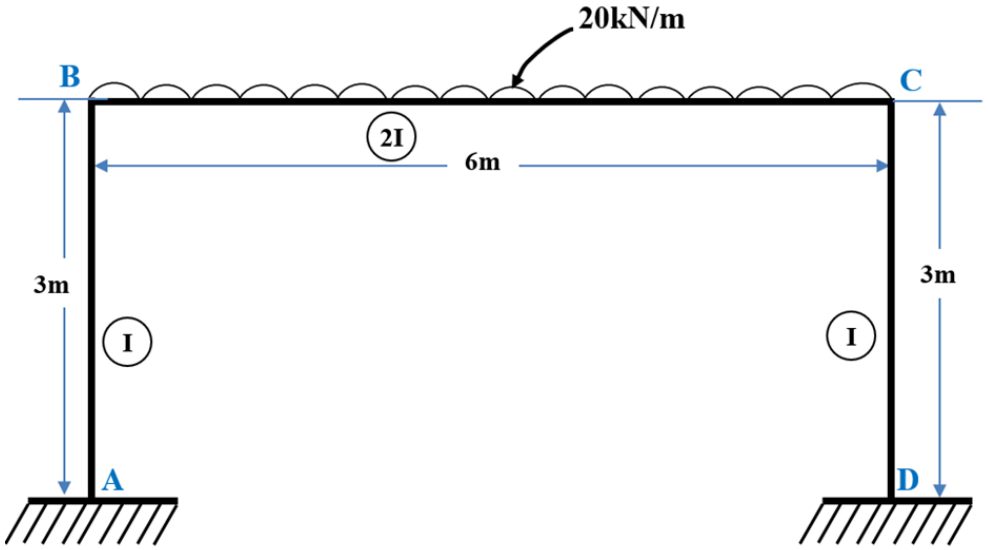
c) 56.66

d) 66.66

PART B

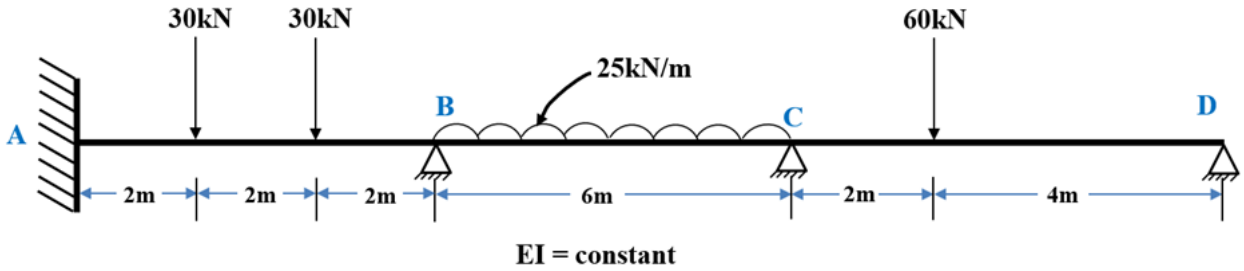
ANSWER ALL THE TWO QUESTIONS **2 X 20 = 40M**

6. Analyse the Portal frame by slope deflection method. Draw the Bending moment diagram and also sketch the deflected shape of the structure.



(CO2) [Comprehension]

7. Analyse the continuous beam ABCD shown in the figure using moment distribution method. Draw the Shear Force Diagram, Bending Moment Diagram and sketch the deflected shape of the structure.

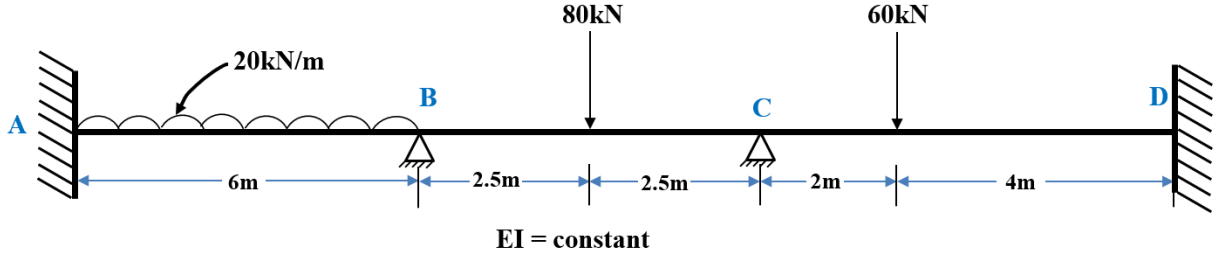


(CO2) [Comprehension]

PART C

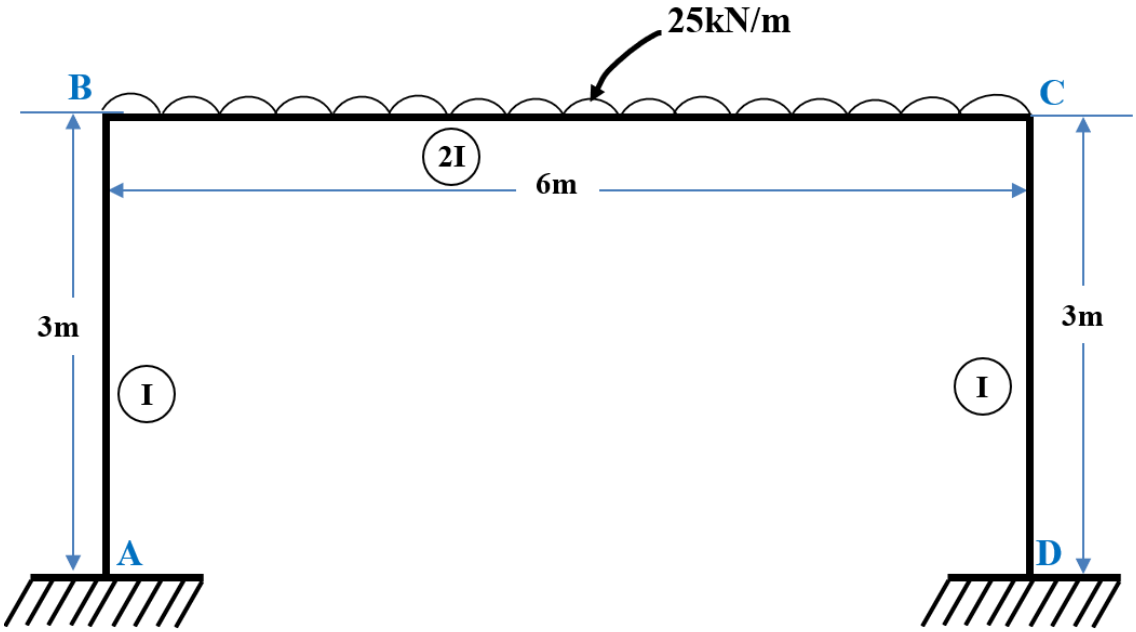
ANSWER ALL THE TWO QUESTIONS **2 X 25 = 50M**

8. Analyse the continuous beam shown in the fig by Kani's method, draw SFD & BMD and also sketch deflected shape of the structure.



(CO2) [Application]

9. Using Kani's method, analyse the Portal frame shown in figure below. Draw the Bending Moment Diagram and sketch the deflected shape of the structure.



(CO2) [Application]

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