Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SET A

SCHOOL OF ENGINEERING
END TERM EXAMINATION - JAN 2024

Semester : Semester V - 2021
Course Code : CIV3002
Course Name : Analysis of Indeterminate Structures
Program : B.Tech.

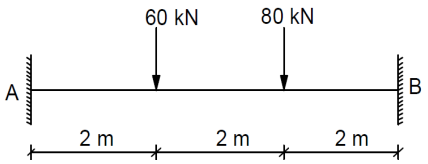
Date : 05-JAN-2024
Time : 9:30AM - 12:30 PM
Max Marks : 100
Weightage : 50%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

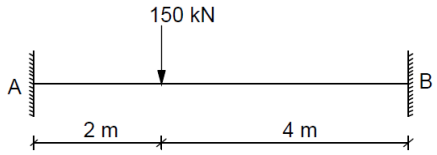
ANSWER ALL THE QUESTIONS **(3Q X 5M = 15M)**

1. Calculate the fixed end moments for the beam loaded as shown in figure.



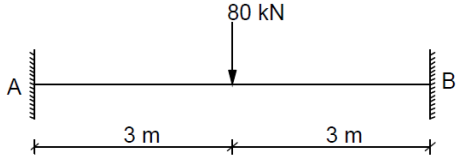
(CO1) [Knowledge]

2. Determine the fixed end moments for the beam loaded as shown in figure.



(CO1) [Knowledge]

3. Determine the fixed end moments for the beam subjected to loads as shown in figure.

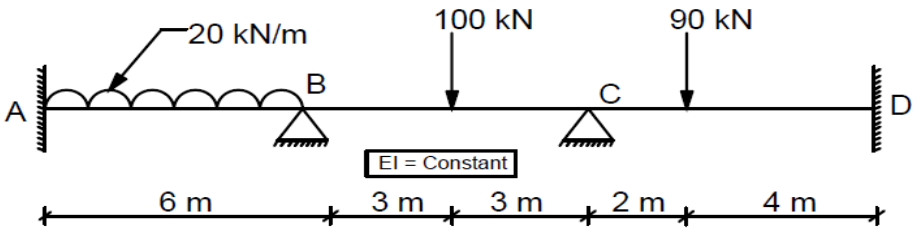


(CO1) [Knowledge]

PART B

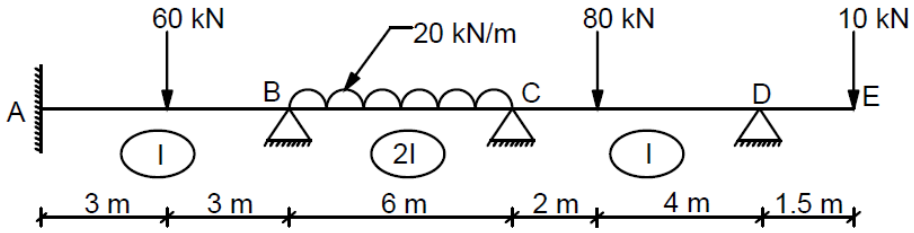
ANSWER ALL THE QUESTIONS **(3Q X 15M = 45M)**

4. Analyze the continuous beam ABCD loaded as shown in figure by Slope Deflection method and draw the BMD and SFD. Also sketch the deflected shape of the structure.



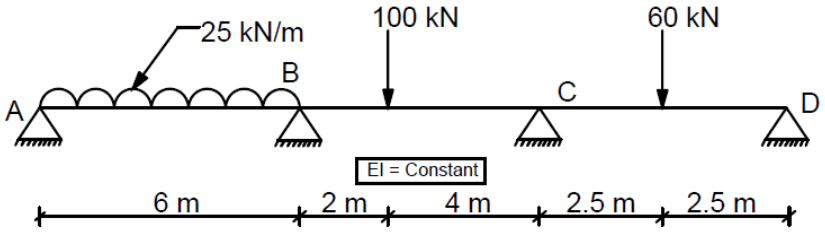
(CO2) [Comprehension]

5. Analyze the continuous beam loaded as shown in figure by Kani's method and draw the BMD and SFD. Also sketch the deflected shape of the structure.



(CO2) [Comprehension]

6. Analyze the continuous beam loaded as shown in figure by Flexibility Matrix Method and draw the BMD and SFD. Also sketch the deflected shape of the structure.

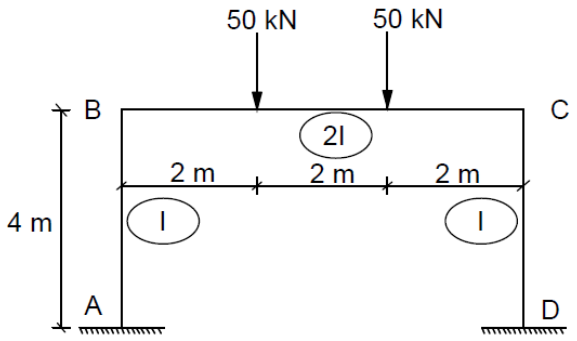


(CO2) [Comprehension]

PART C

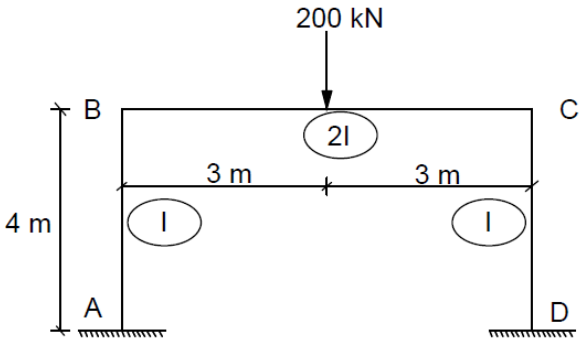
ANSWER ALL THE QUESTIONS **(2Q X 20M = 40M)**

7. Analyze the Portal frame loaded as shown in the figure by Moment Distribution method and draw the BMD. Also sketch the deflected shape of the structure.



(CO3) [Application]

8. Analyze the Portal frame loaded as shown in figure by Kani's method and draw the BMD. Also sketch the deflected shape of the structure.



(CO3) [Application]