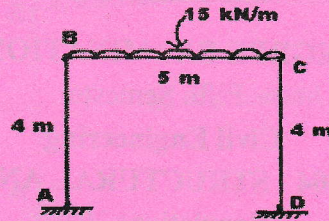




b) Solve using strain energy method

13,K3,CO1



12. a) Analyze the continuous beam ABC shown in figure by slope deflection method. Draw also the bending moment diagram. Take  $EI = \text{constant}$ . 13,K3,CO2

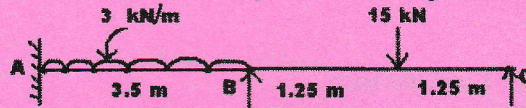
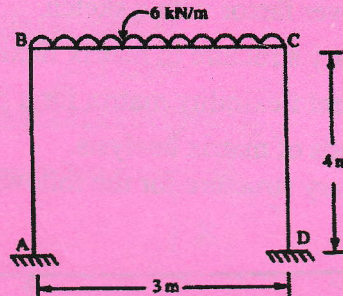


Fig.

OR

- b) Solve using Slope Deflection Method and Draw the BM diagram.

13,K3,CO2



13. a) Analyse the beam shown in figure by moment distribution method and draw the SFD and BMD. Take  $EI = \text{constant}$ . 13,K3,CO3

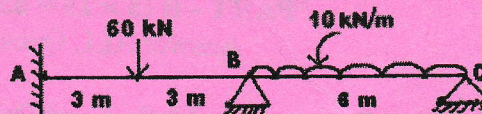
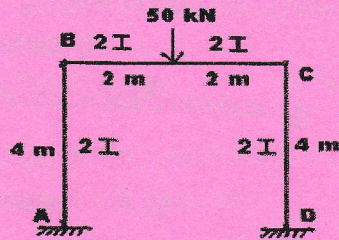


Fig.

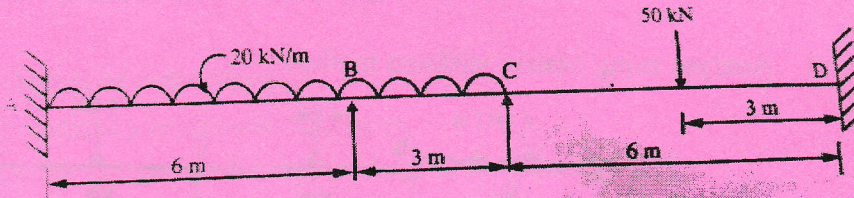
OR

- b) Analyse the portal frame shown in figure by moment distribution method.

13,K3,CO3

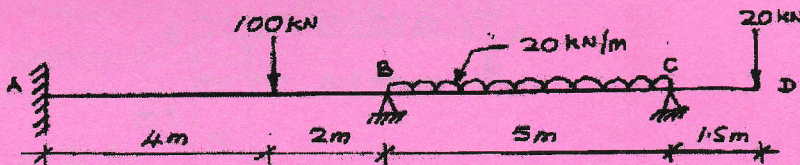


14. a) Analyse the continuous beam ABCD shown in figure by slope deflection method. The support B sinks by 10mm. Take  $E = 2 \times 10^5 \text{ N/mm}^2$  and  $I = 16 \times 10^7 \text{ mm}^4$ . 13,K3,CO4

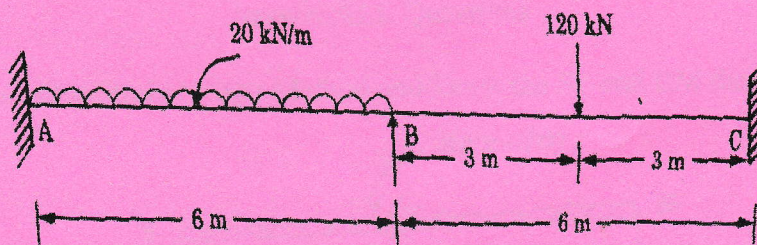


OR

- b) Analyse the continuous beam ABCD shown in figure by slope deflection method. The support B sinks by 15mm. Take  $E = 200 \times 10^5 \text{ kN/m}^2$  and  $I = 120 \times 10^6 \text{ m}^4$ . 13,K3,CO4



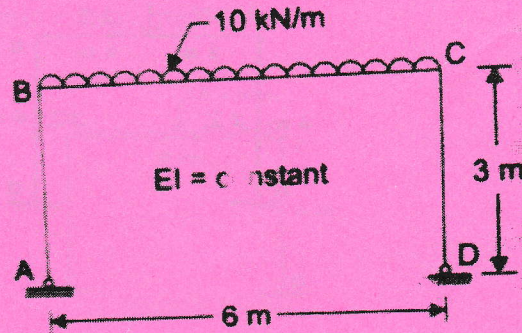
15. a) Analyse using Matrix flexibility method. 13,K3,CO5



OR

b) Analyse using Matrix flexibility method.

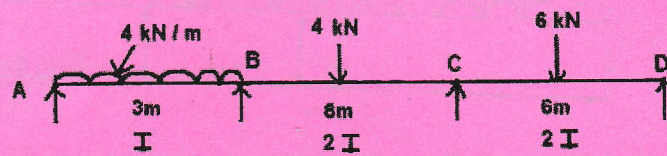
13.K3,CO5



**PART - C (1 × 15 = 15 Marks)**

16. a) Analyse using Matrix stiffness method.

15.K3,CO6



OR

b) Analyse using Matrix stiffness method.

15.K3,CO6

