

SECTION-B

2. Three wires AD, BD and CD having the same cross-sectional area and of the same material support a load W as shown in figure 1. Determine the force in the three wires.

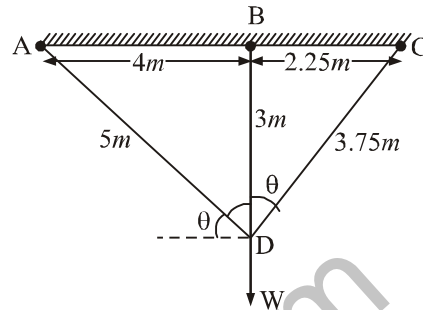


Fig.1

3. A continuous beam ABC consists of spans AB and BC of lengths 3 m and 4 m respectively, the ends A and C being simply supported. If the spans AB and BC carry UDL of intensity 50 kN/m and 40 kN/m respectively, determine the support moments at A, B and C. Draw S.F and B.M diagrams. The moments of inertia for the spans AB and BC are I and $2I$ respectively.
4. Analyse the frame as shown in figure 2 using slope deflection method and draw BMD. Assume uniform flexural rigidity.

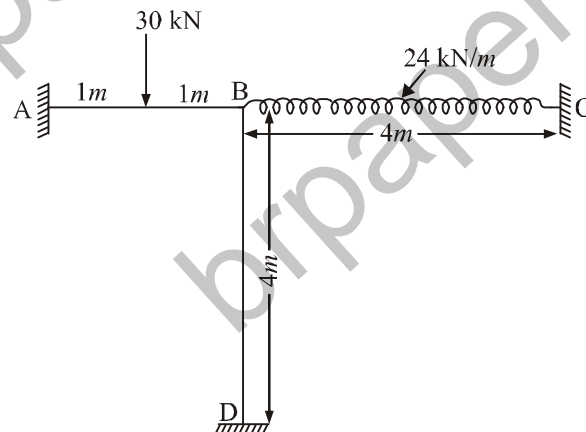


Fig.2

5. Using method of tension coefficients, analyse the cantilever plane truss as shown in figure 3 and find the member forces.

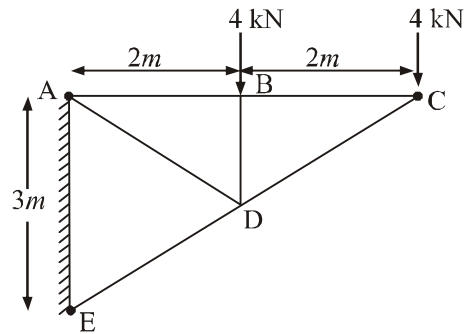


Fig.3

6. Draw the influence line for reaction at B for the proposed cantilever as shown in figure 4. Compute the influence line ordinates at 1.5 m intervals.

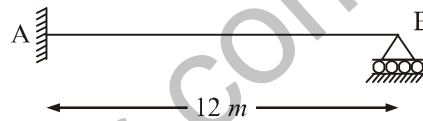


Fig.4

SECTION-C

7. Analyse the rigid jointed frame loaded as shown in figure 5 using portal method.

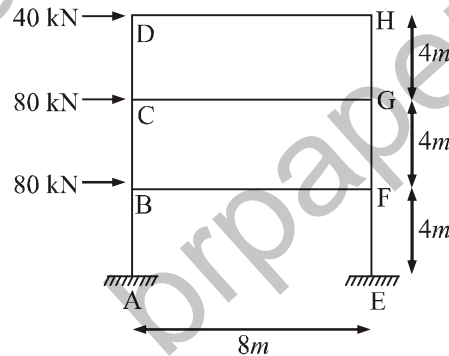
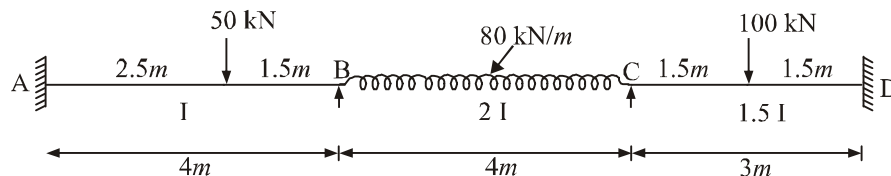


Fig.5

8. Determine the support moments at A, B, C, D for the continuous beam as shown in figure 6, using rotation contribution method.



9. A beam AB of span 4m is fixed at A and B and carries a point load of 5 kN at a distance of 1 m from end A. Calculate the support moments by method of consistent deformation.