

Code: CE4T6

II B.Tech - II Semester – Regular Examinations - JUNE 2014

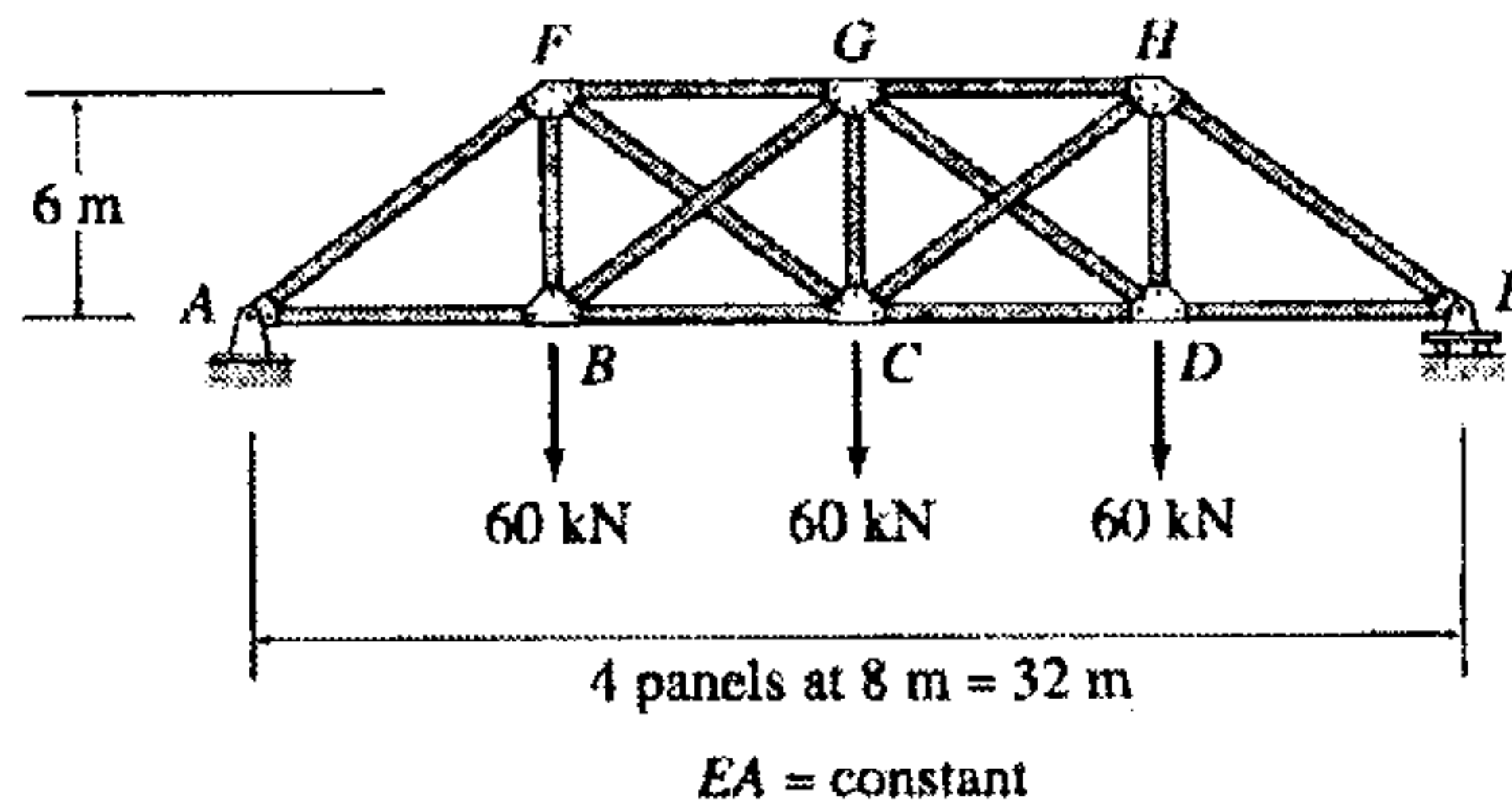
**STRUCTURAL ANALYSIS - I
(CIVIL ENGINEERING)**

Duration: 3 hours

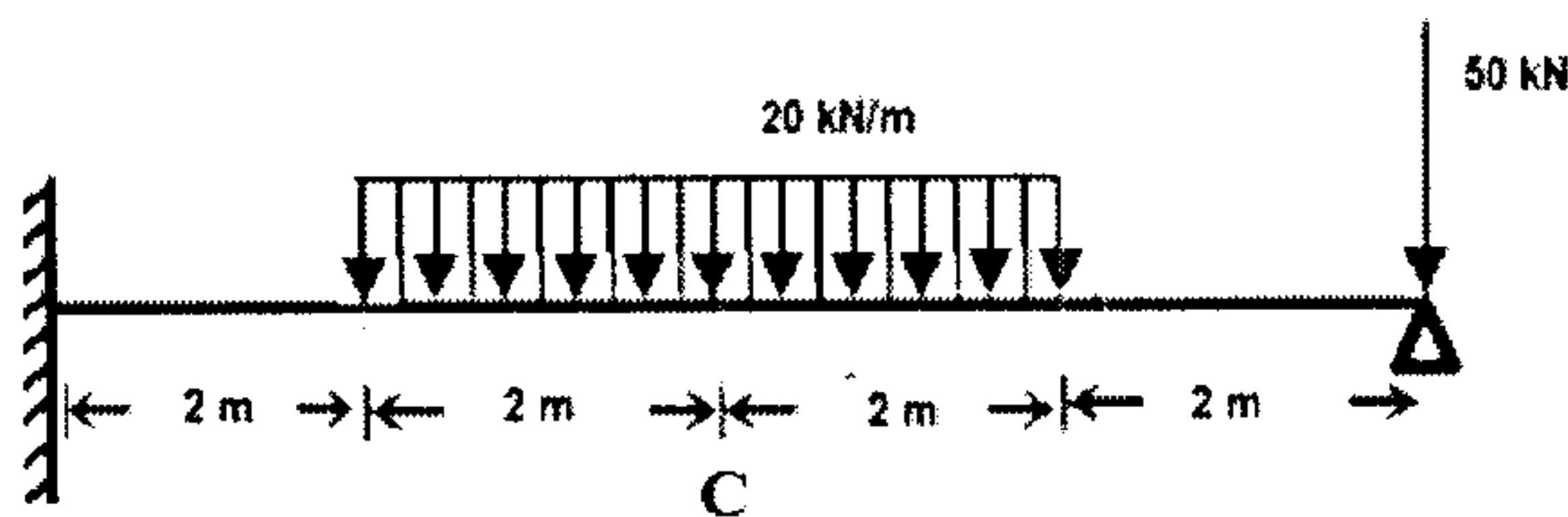
Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

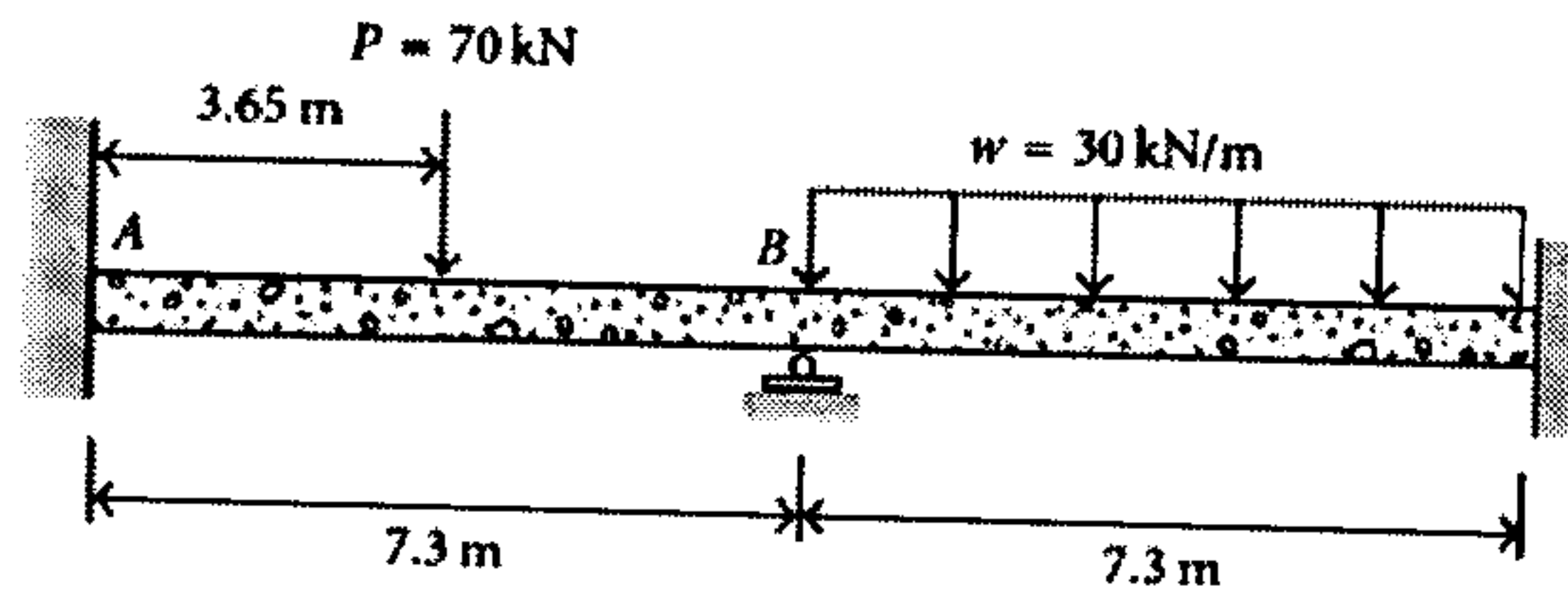
1. Determine the reactions at the support and the forces in all the members for given truss. 14 M



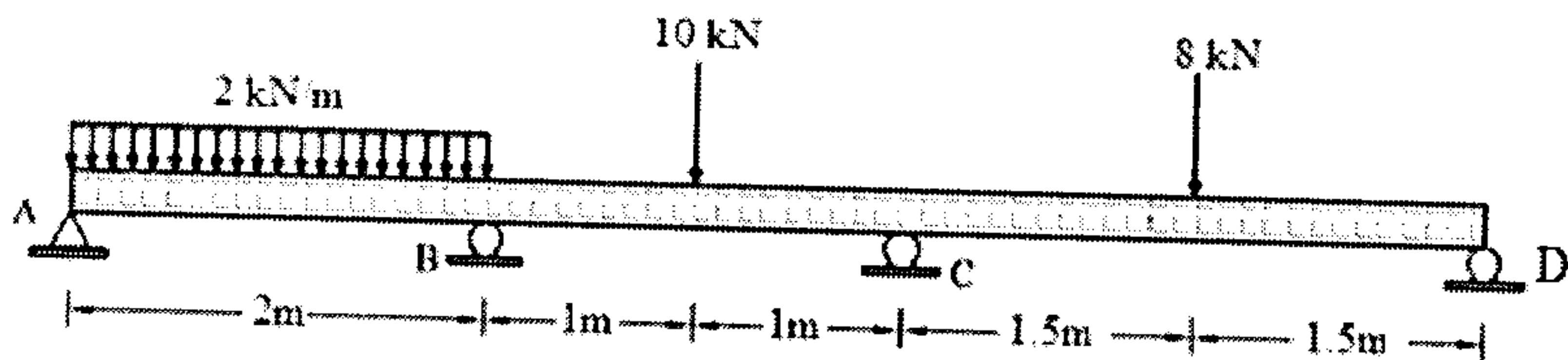
2. Calculate the deflection at point C of a propped cantilever beam shown in fig. 14 M



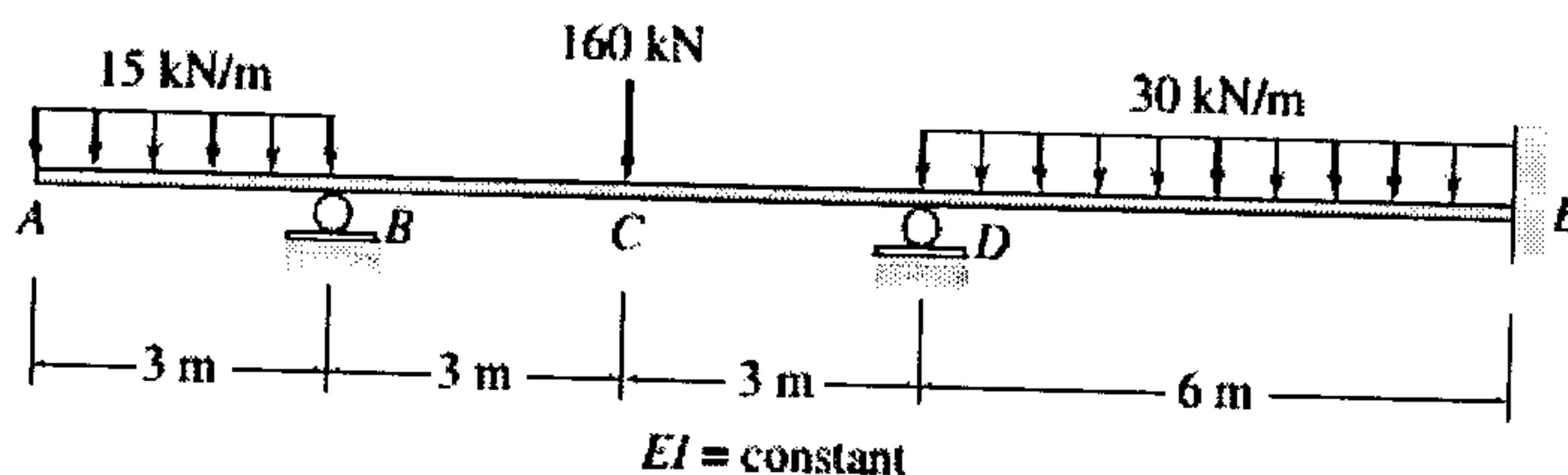
3. Draw Shear force and bending moment diagrams for the fixed beam shown in fig. 14 M



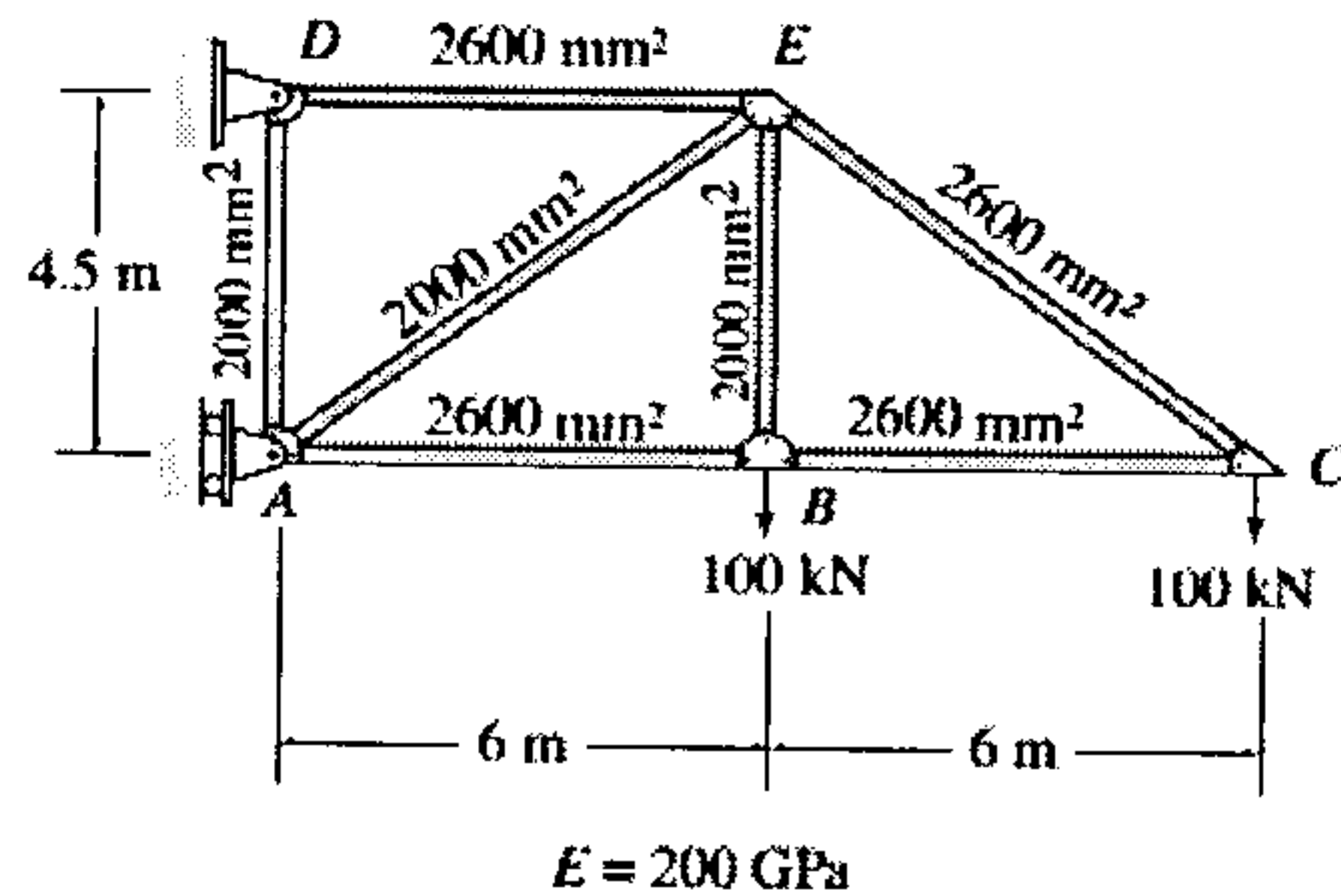
4. Analyse the continuous beam shown in fig. by using Clapeyron's theorem of three moments. 14 M



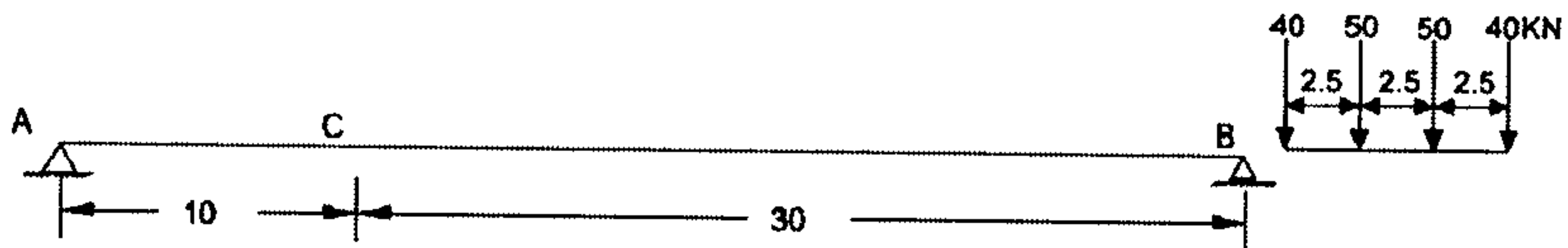
5. A continuous beam is as shown in fig. the support D sinks by an amount of $5/EI$. Analyse the beam by using slope deflection method? 14 M



6. Determine the deflection at joint 'c' for the truss loaded as shown in fig. 14 M



7. The beam is loaded with concentrated loads, which are moving from right to left as show in fig. compute the maximum shear force and moment at C and draw the influence line diagrams for the same. 14 M



8. The beam is loaded with two loads 25 kN spaced at 2.5m and 3.0 m respectively is travelling on the beam having span of 10 m from right to left. Find the maximum bending moment at the center of the span. Also find the absolute maximum bending moment on the span. 14 M