B.E. (Civil Engineering) Model Curriculum Semester-VI

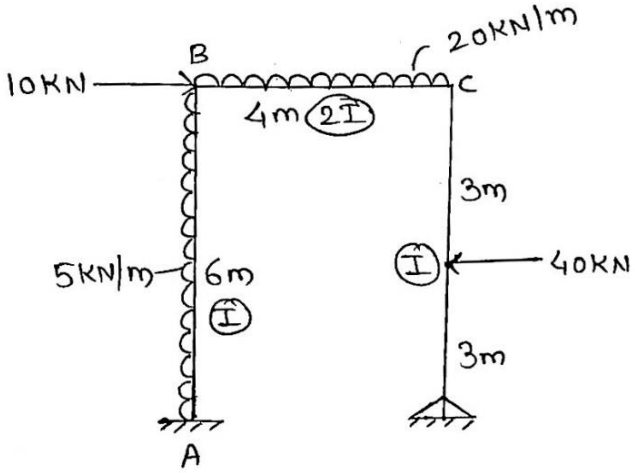
PCC-CE604 - Structural Analysis-II

P. Pages : 4 **GUG/W/24/13735**

Time : Three Hours * 5 4 1 2 * Max. Marks : 80

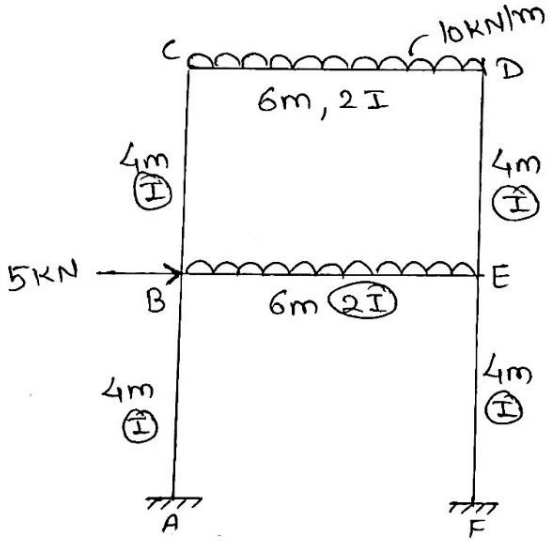
Notes : 1. All questions are compulsory.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Diagrams and Chemical equation should be given wherever necessary.
5. Illustrate your answers wherever necessary with the help of neat sketches.

1. Analyze the frame shown in figure using Kani's method and draw BMD. **16**

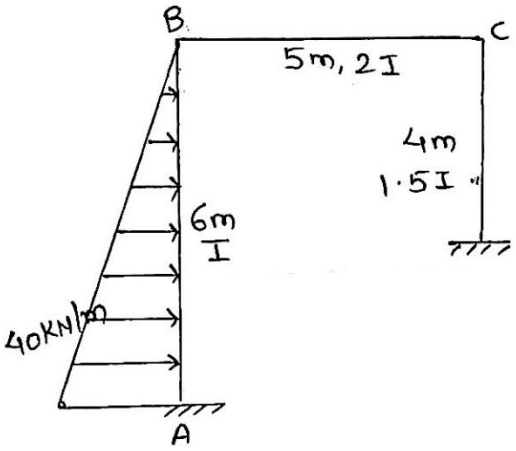


OR

2. Analyze the frame shown in figure using Kani's method and draw BMD. **16**

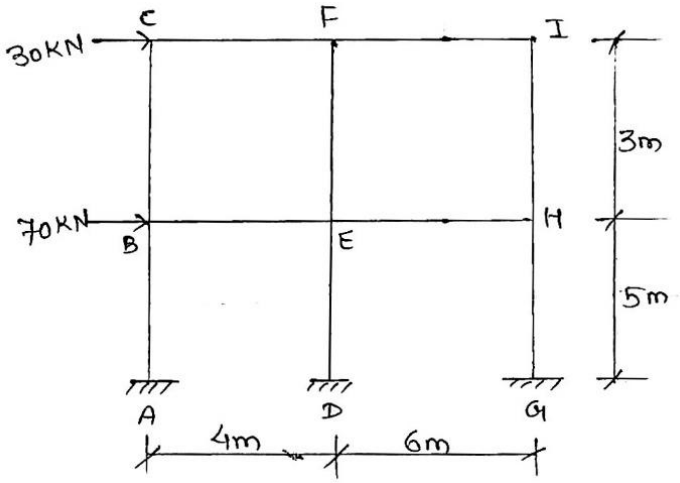


3. Analyze the frame as shown in figure by moment distribution method and draw BMD. **16**



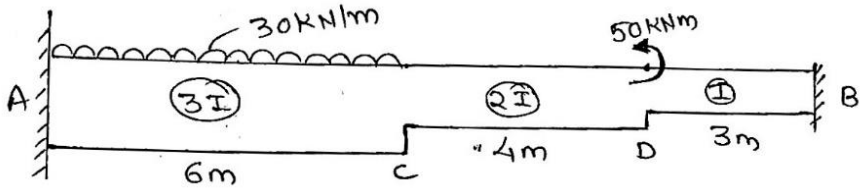
OR

4. Determine the shear force and end moments in the column and beam of the building. **16**



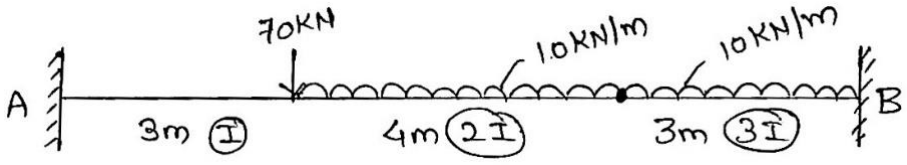
Area of column constant (A).

5. Analyze the beam shown in figure by column analogy method and draw BMD. **16**

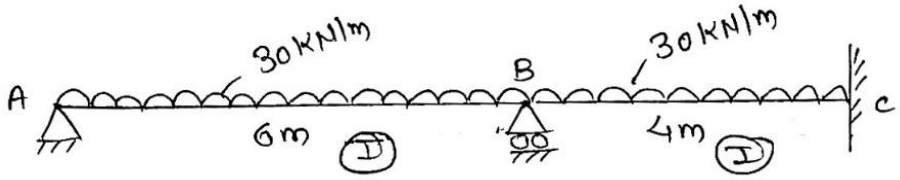


OR

6. Analyze the beam shown in figure by column analogy method and draw BMD. **16**

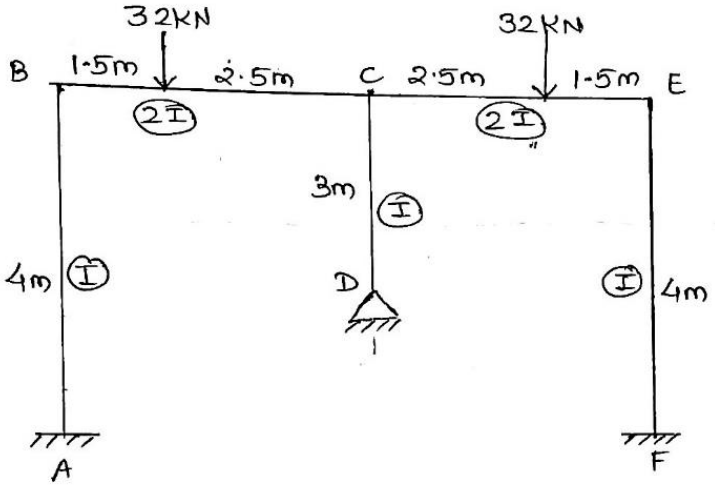


7. Analyze the beam shown below by flexibility method and draw BMD. **16**



OR

8. Analyze the three legged frame as shown in figure by moment distribution method. **16**

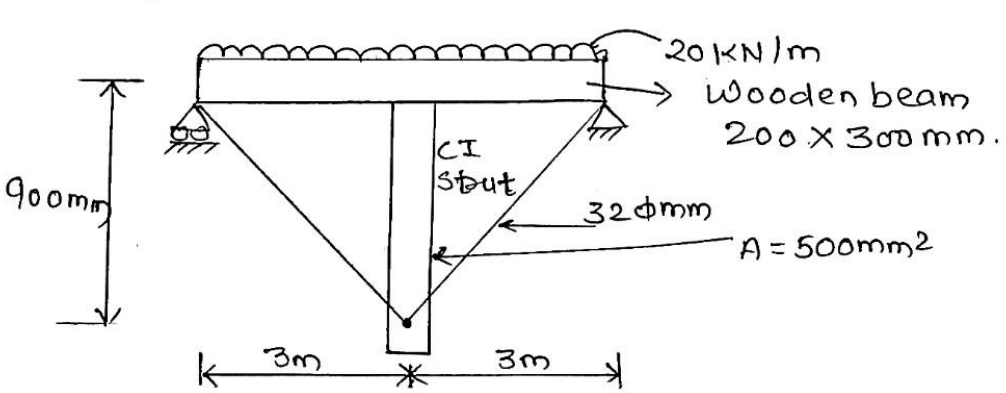


9. Analyze the composite structure by strain energy method. **16**

i) The wooden beam = 200 x 300 mm c/s
modulus of elasticity = 12 kN/mm^2.

ii) Cast iron strut 500 mm^2 area and modulus of elasticity = 90 GPa.

iii) Mild steel rod 32 mm ϕ diameter.



OR

10. Write short notes on **any four** of the following. **16**

i) Circular polariscope.

ii) Stress – optic law.

iii) Type of strain gauges and their application.

iv) Generalized Hooke's law.

v) Isoclinic and Isochromatics.

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