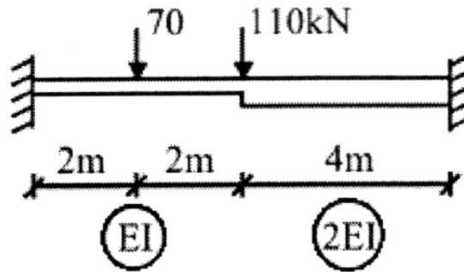


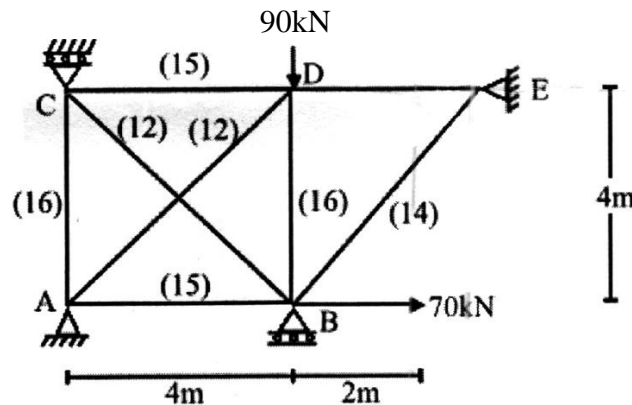


Notes : 1. Solve **any five** questions.

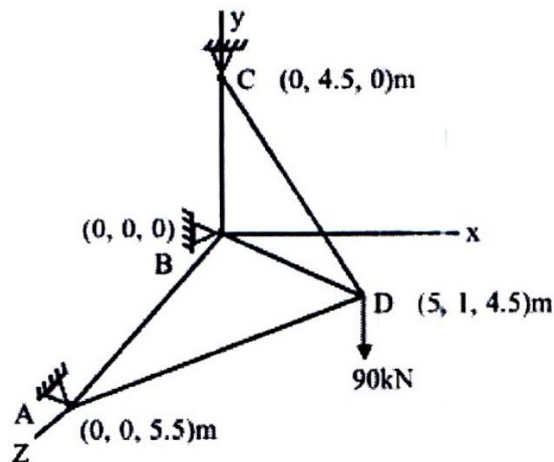
1. Write formulation of stiffness method with example. 14
2. Analyze the beam shown in figure using flexibility method. 14



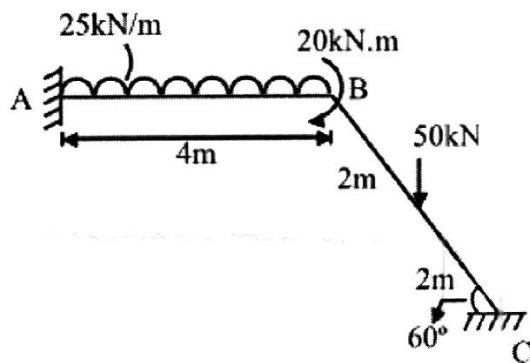
3. Analyze the plane truss shown below by direct stiffness method. All the dimensions are in cm^2 . 14



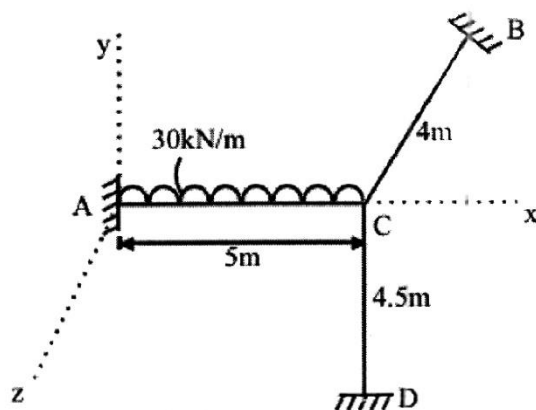
4. Analyze the space truss shown below by stiffness method. AE/L is uniform. 14



5. Analyze the frame below using direct stiffness method. 14



6. Analyze the space frame shown below using direct stiffness method. 14



7. Analyze the grid shown below using stiffness method. 14
 $E = 210000 \text{ MPa}$
 $G = 85000 \text{ MPa}$
 Member dimensions are 120 x 210 mm.

