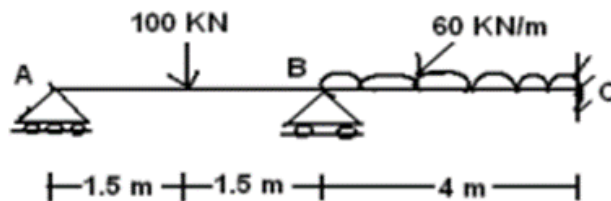


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**School of Engineering****M.Tech Structural Engineering  
Mid Term Examination - Nov 2023****Duration : 90 Minutes  
Max Marks : 50****Sem I - G1PC102T - Matrix Methods of Structural Analysis**General Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Outline the types of matrix methods of analysis of indeterminate structures. K2 (2)
- 2) Define indeterminacy of a structure. K1 (3)
- 3) Explain stiffness and flexibility in structural analysis. K2 (4)
- 4) Illustrate the stress strain relationship for plane stress problems. K2 (6)
- 5) Identify Determinants of matrices. K3 (6)
- 6) Construct steps for analysis of continuous beam using flexibility method. K3 (9)
- 7) Classify types of joints and supports in structures. K4 (8)
- 8) Analyse the continuous beam shown in figure using force method. K4 (12)

**OR**

Analyse the portal frame ABCD shown in figure using force method

K4 (12)

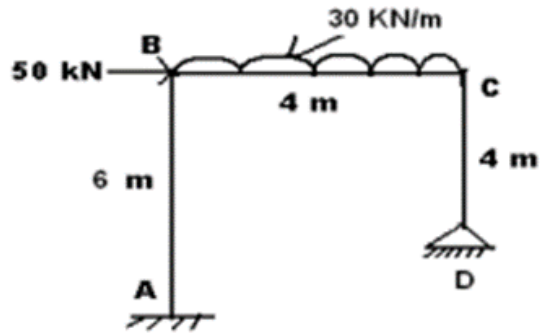


Fig.