



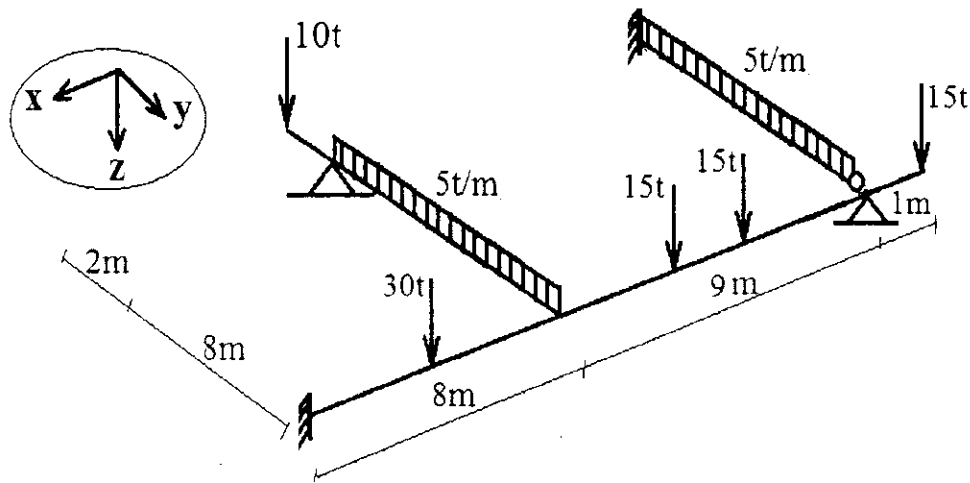
Allowed Tables and Charts: (None or e.g. Steam Tables)

Answer all the following Questions [100 Marks]

Marks

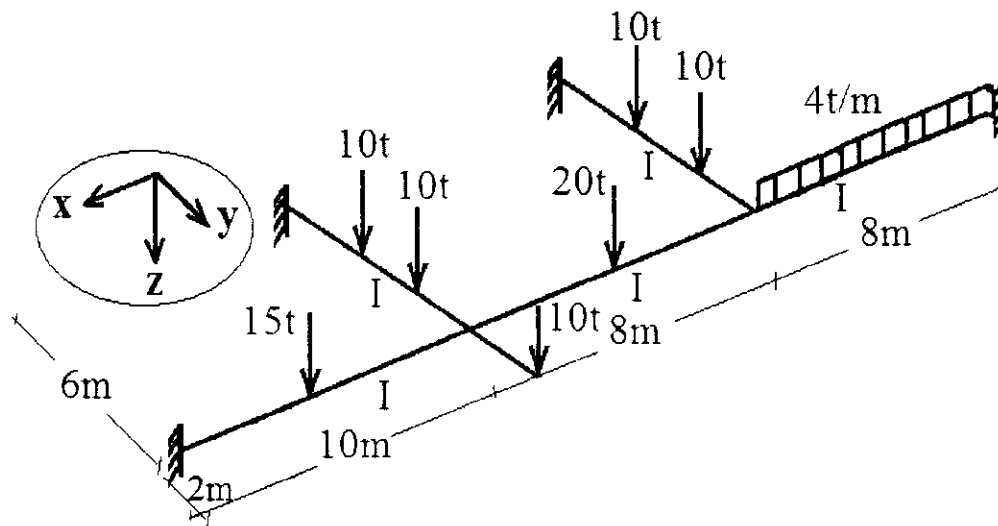
**Question (1)**

For the shown structure (Constant I), draw shear force, bending moment and torsion moment diagram. [35]



**Question (2)**

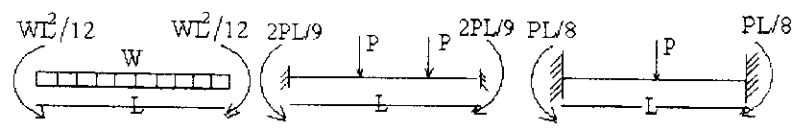
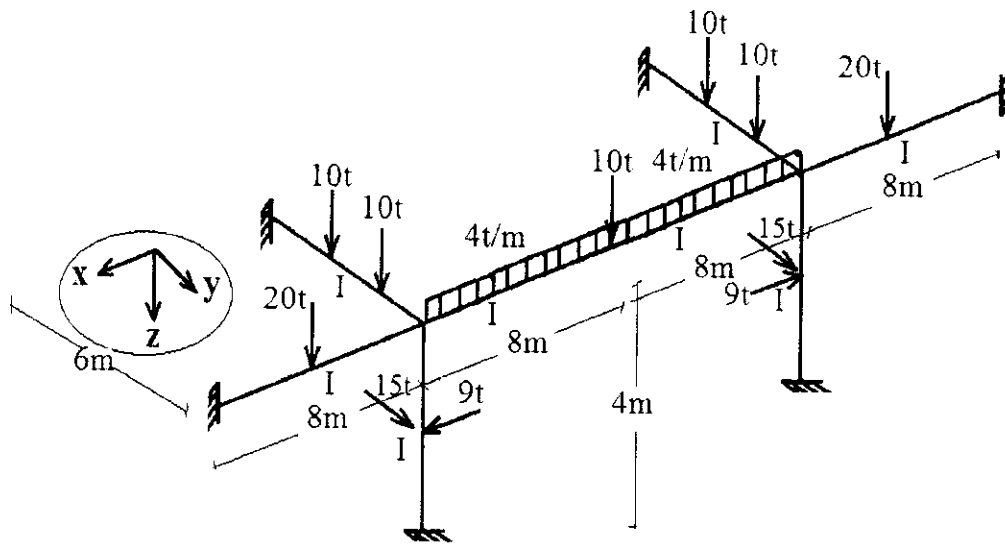
For the shown structure, conclude the overall stiffness matrix. [35]



**Question (3)**

[30]

For the shown structure, draw shear force, bending moment and torsion moment diagram.



*With my best wishes*