



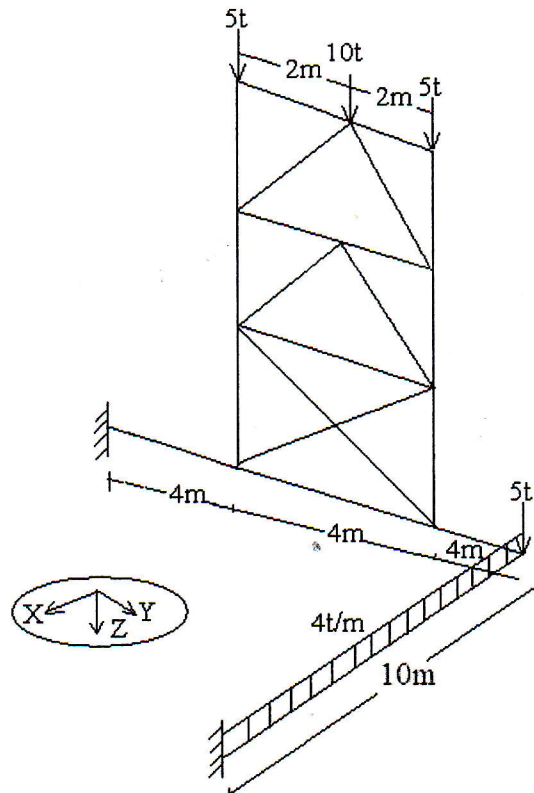
Allowed Tables and Charts: (None or e.g. Steam Tables)

Answer all the following Questions [100 Marks]

Marks

Question (1)

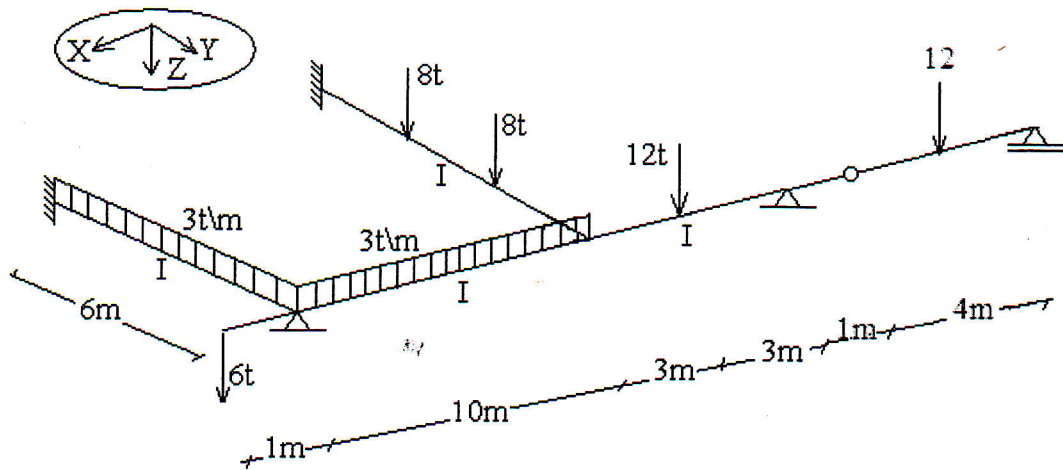
For the shown structure (Constant I), draw shear force, bending moment and torsion moment diagram. [33]



Question (2)

For the shown structure, conclude the overall stiffness matrix.

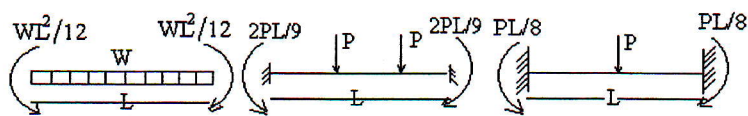
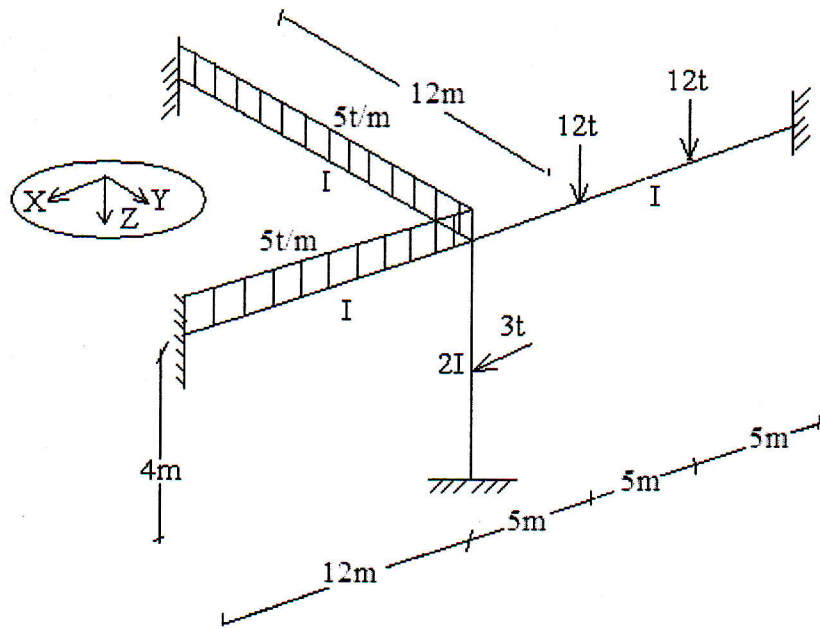
[35]



Question (3)

[35]

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



With my best wishes