



Answer all the following questions: [35 Marks]

**Question 1 [10 marks]**

Draw the normal force, shear force and bending moment diagram due to the applied loads for the given compound beam in Fig. 1.

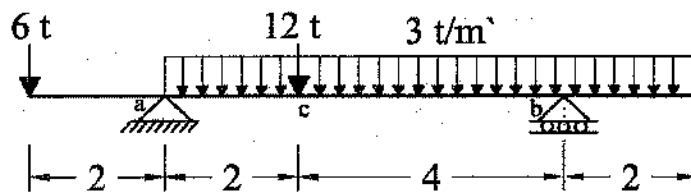


Fig. 1

**Question 2 [15 marks]**

For the given frame in Fig. 2, draw the normal, shear force and bending moment diagrams.

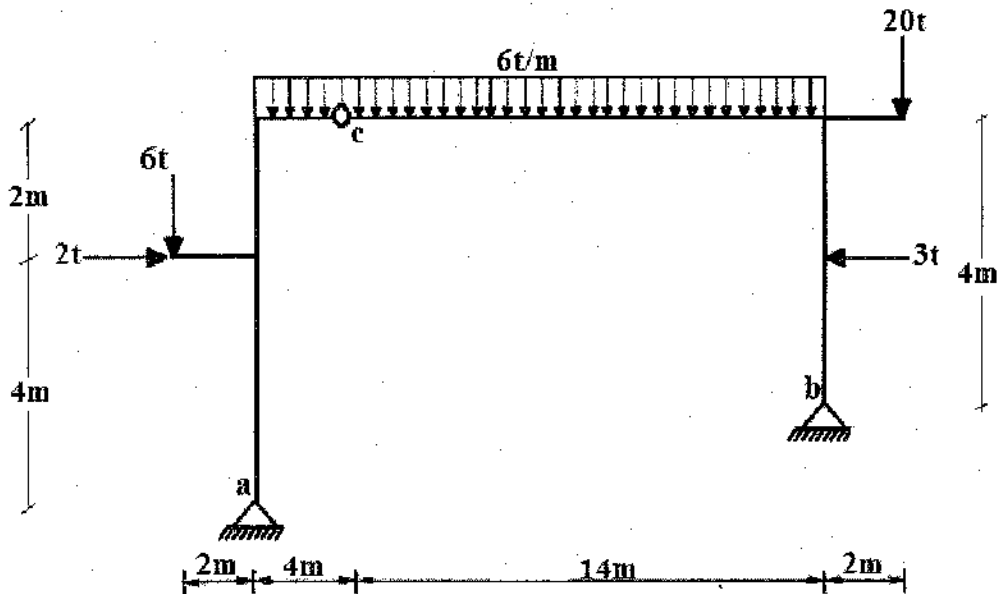


Fig. 2

**Question 4 [10 marks]**

Find analytically the forces in all members of given truss in Fig. 3.

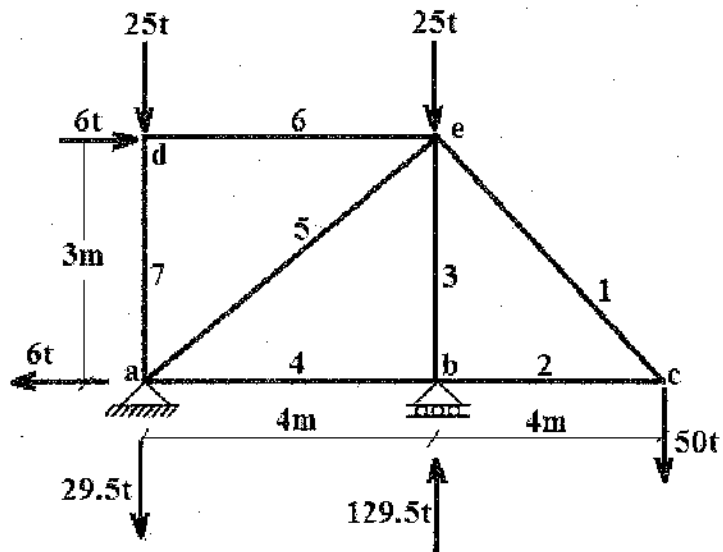


Fig. 3

This exam measures the following ILOs							
Question Number	Q1	Q2	Q3	Q1	Q2	Q1	Q3
	Knowledge & understanding skills			Intellectual Skills		Professional Skills	

Good Luck Dr. Fathi Abdelazeem Abdelmgeed