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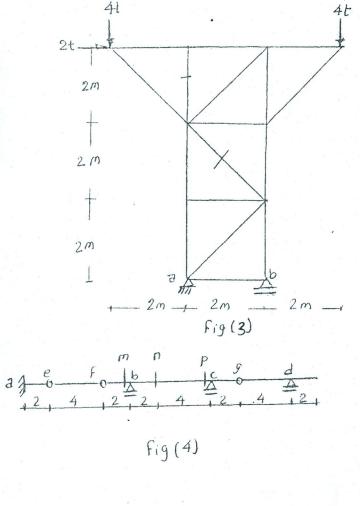
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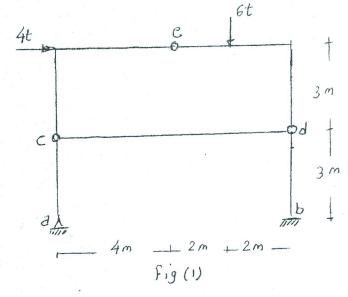
Q1:(20%) For the shown structure in fig. (1), calculate the reaction supports a and b.

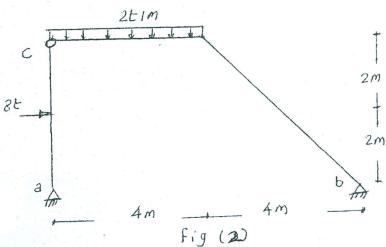
<u>Q2:(30%)</u> For the shown frame in fig. (2); draw the normal force ,shear force and bending moment diagrams.

Q3:(30%) Find the all forces in the shown truss in fig.(3); graphically. Then check the force in the marked member analytically.

<u>Q4:(30%)</u> For the shown beam in fig (4); draw the influence line for the reactions; shear force and bending moment at section **n,m,p**. If the beam is subjected to uniform L.L.=2t/m with length equal 3m; then calculate the maximum reactions at supports a,b; shear and moment in section n.







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 $\underline{Q1:(20\%)}$ For the shown structure in fig. (1), calculate the reactions at supports a , b and c.

<u>Q2:(30%)</u> For the shown frame in fig. (2); draw the normal force ,shear force and bending moment diagrams.

Q3:(30%) Find the all forces in the shown truss in fig.(3); graphically.

 $\underline{Q4:(30\%)}$ For the shown beam in fig (4); draw the influence line for the reactions; shear force and bending moment at sections **e**, **f**, **g** and **c**.

