

Name	Reg. No	Department

Answer all questions. Each question carries 5 marks.

The truss shown in fig 1 is subjected to two external forces.

1. The internal force in member AB is.....
2. The internal force in member BC is.....
3. The internal force in member CD is
4. The internal force in member AD is.....
5. The reaction at support A is.....
6. The reaction at support C is.....

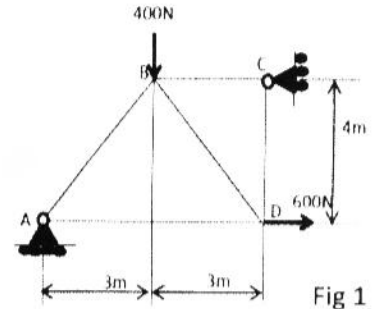


Fig 1

7. The projection of a force $\mathbf{P} = 11\mathbf{i} - 8\mathbf{j} + 4\mathbf{k}$ N on the directed line which originates at point A (2,-2, 3) m and passes through point B (6, 2,-3) m is.....

The plate shown in fig 2 is a composite area, determine

8. The moment of inertia of the circle of radius 25mm is.....
9. The moment of inertia of the rectangle is.....
10. The moment of inertia of the composite area about the x axis is...

A 1300N force is directed along the line from point A (2, 1, 4) m to B (4, 2.1) m.

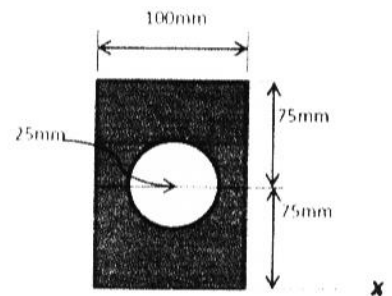


Fig 2

11. The moment of this force about the x axis is.....
12. The moment of this force about the z axes is.....