

OR

Q.6	a. Enumerate Lami's Theorem with proof.	10	L3	CO3
	b. Determine the resultant of forces acting on the bell crank shown in Fig.Q6(b).	10	L3	CO3

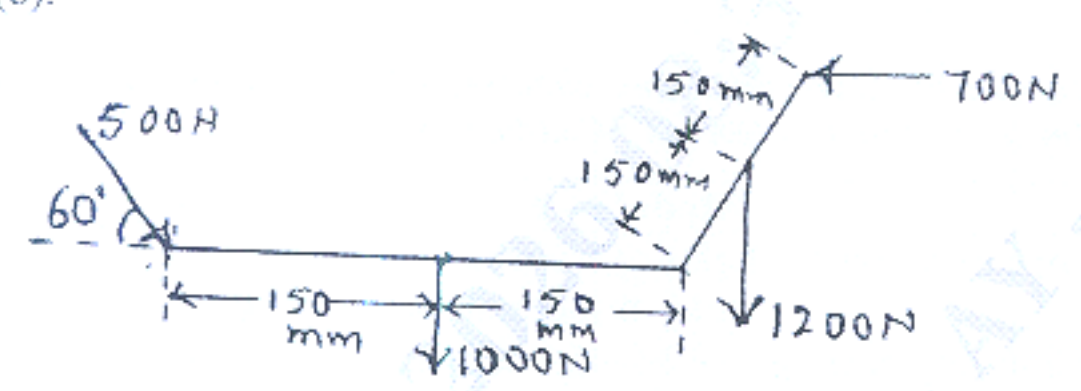


Fig.Q6(b)

Module - 4

Q.7	a. Derive the expression for centroid of a quarter circle of radius 'R'.	10	L3	CO4
	b. Determine centroid of given area shown in Fig.Q7(b).	10	L3	CO4

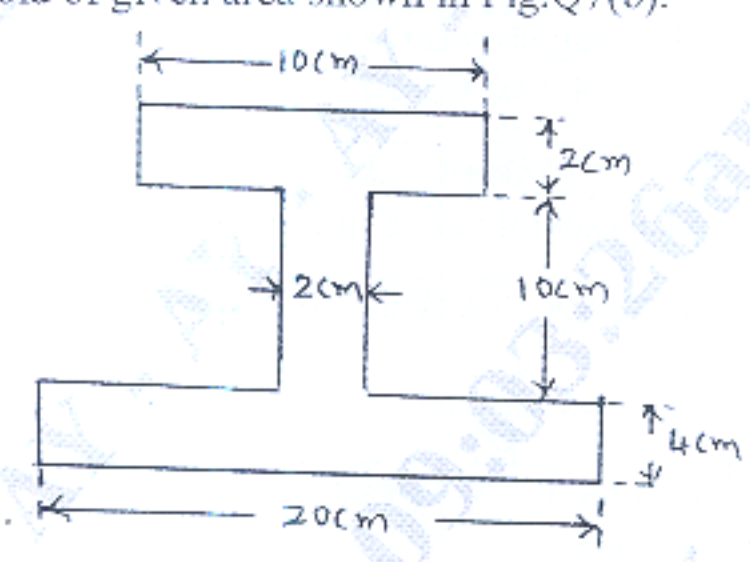


Fig.Q7(b)

OR

Q.8	a. Derive the expression for centroid of a triangle of base width 'b' and height 'h'.	10	L3	CO4
	b. Determine centroid of plane shown in Fig.Q8(b).	10	L3	CO4

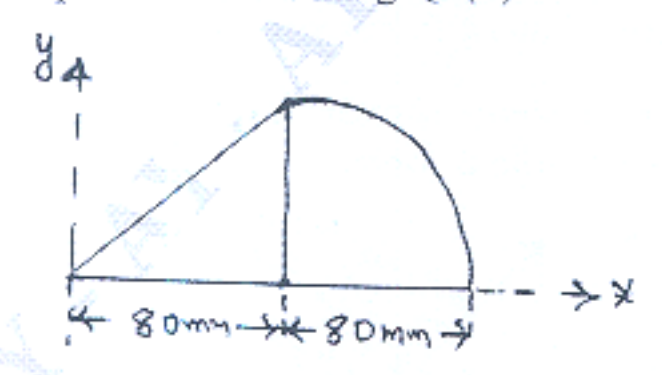


Fig.Q8(b)

Module - 5

Q.9	a.	Derive the expression for moment of inertia of a circle of radius 'R'.	10	L3	CO5
	b.	Determine moment of inertia and radius of gyration of the section shown in Fig.Q9(b) about centroidal XX and YY axis.	10	L3	CO5

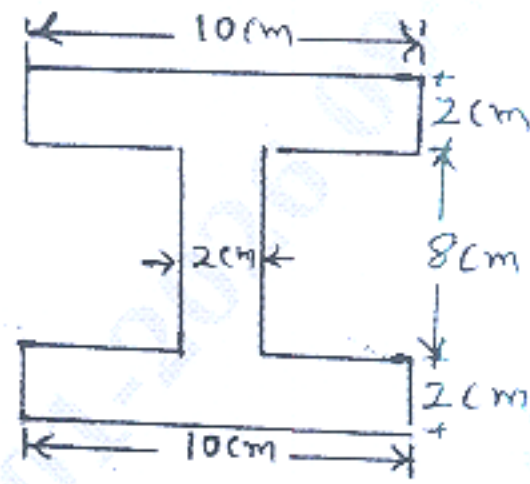


Fig.Q9(b)

OR

Q.10	a.	Derive the expression for moment of inertia semicircle of radius 'R'.	10	L3	CO5
	b.	Determine the radius of gyration of shaded area shown in Fig.Q10(b) about AB-axis.	10	L3	CO5

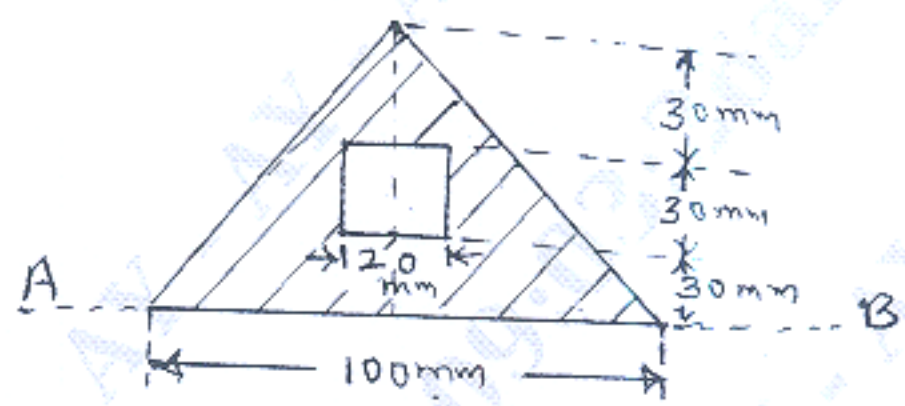


Fig.Q10(b)
