





























- 6.(a) Define (i) Angular displacement (ii) Angular velocity (iii) Angular acceleration.  
 (b) Determine the coordinates of the centroid of the plane area shown in Fig.9 with reference to the axes shown. Take  $x=40$  mm.

[8+8]

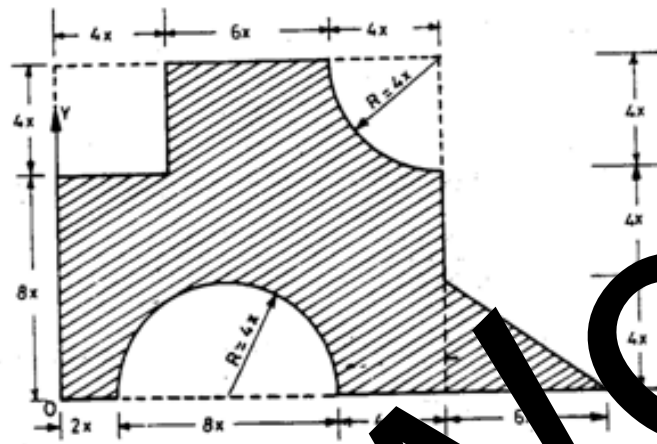


Fig.9

- 7.(a) Derive the parallel axis theorem in moment of inertia?  
 (b) A stone is dropped into a well without initial velocity. Its splash is heard after 3.5 seconds. Another stone is dropped with some initial velocity and its splash is heard after 3 seconds. Determine the initial velocity of the second stone if velocity of sound is 335 m/sec.

[8+8]