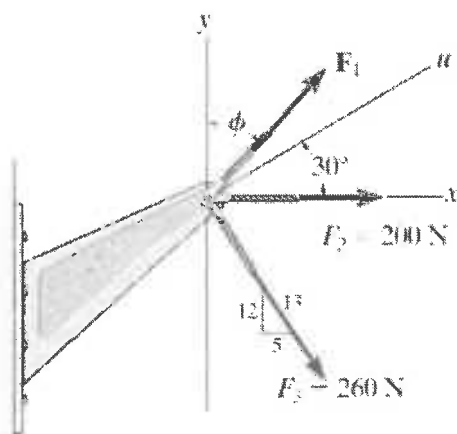
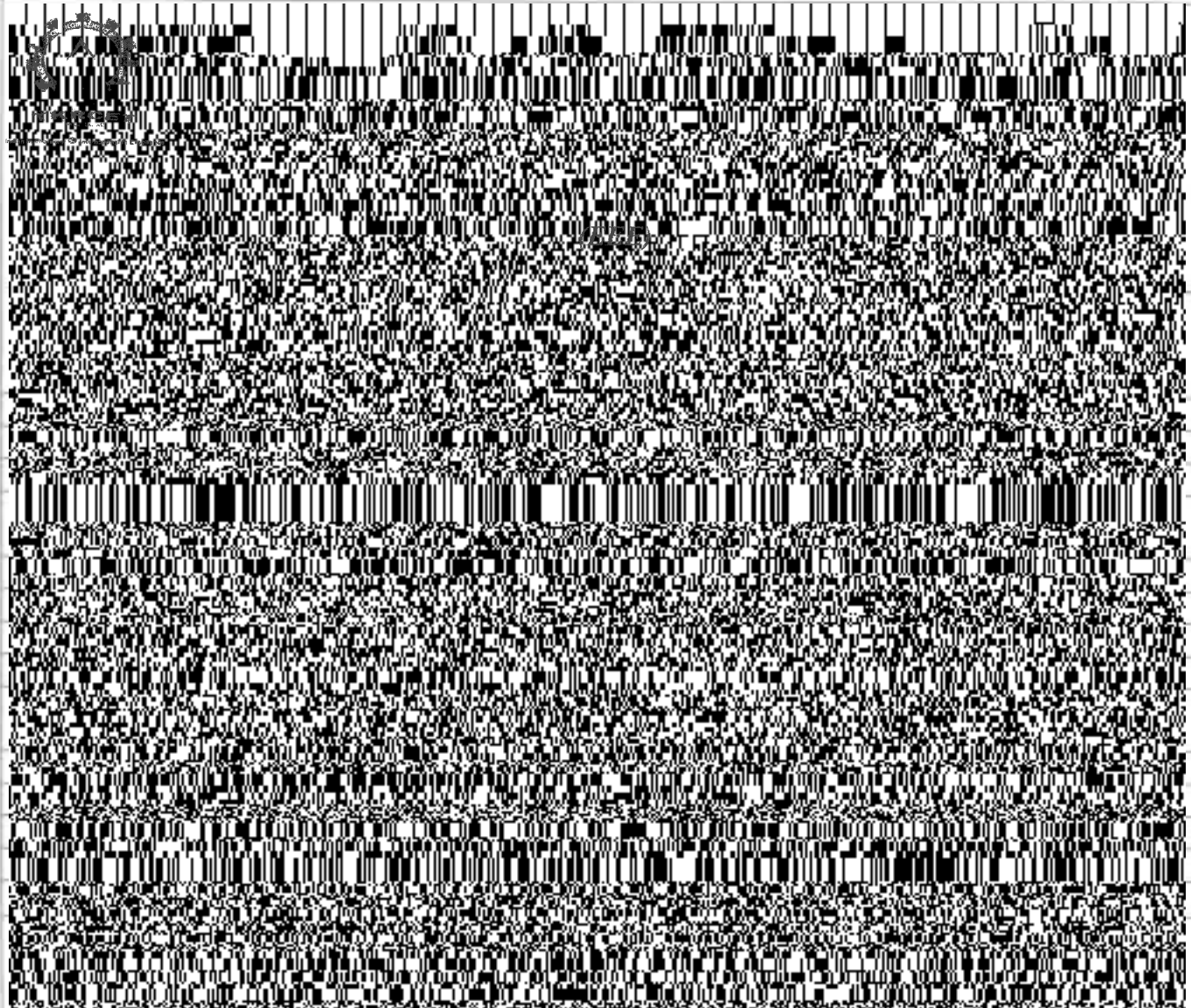
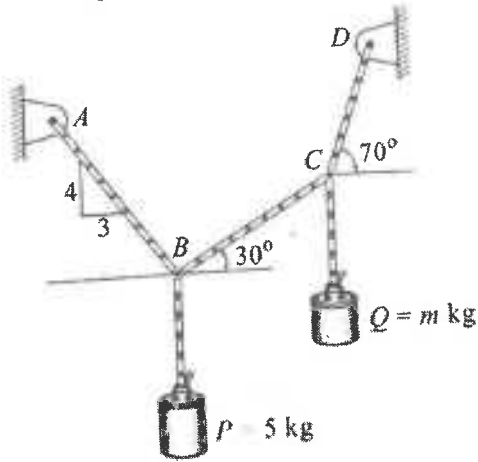
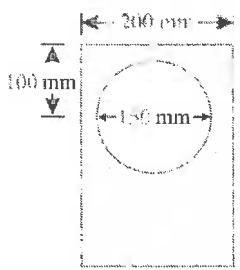




	OR			
12	A block P is 5kg and block Q of mass m kg are suspended through the cord which is in the equilibrium position, as shown in below fig. determine the mass of Q? 	10M	1	L2
13	Derive the centroid of the triangular area? OR	10M	2	L2
14	A ladder 5 m long rests on a horizontal ground and leans against a smooth vertical wall at an angle of 70° with the horizontal. The weight of the ladder is 300 N. The ladder is on the verge of sliding when a man weighing 750 N stands on a rung 1.5 m along the ladder. Calculate the coefficient of friction between the ladder and the floor.	10M	2	L2
15	Find the moment of inertia of a hollow section shown in Fig. about an axis passing through its centre of gravity or parallel X-X axis 	10M	3	L2

16 Find the moment of inertia of the lamina with a circular hole of 30 mm diameter about the axis AB as shown in Fig

10M

3

L2

