PRINCIPLES OF MOMENT II

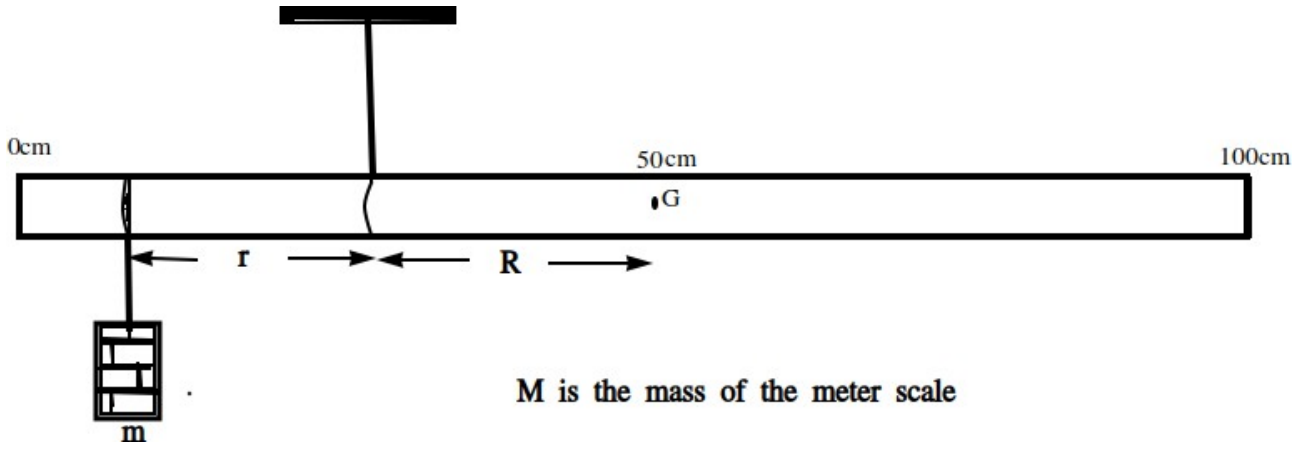
AIM

To find the mass of meter scale using Principle of Moments

APPARATUS

Metre Scale, slotted weights, weight hanger etc.

THEORY



A uniform metre scale of mass M is in equilibrium position by hanging a mass (m) as shown in the figure. The centre of mass of the scale is assumed to be concentrated at 50 cm (Middle of the scale)

At rotational equilibrium, **mr = MR**

Where **r** is the distance from the point of suspension of the scale to the mass m and **R** is the distance from the point of suspension of the scale to the Centre of Mass (**G**) of the scale

OBSERVATIONS

Reading of the Centre of Gravity of the scale (G) = cm

Distance between the weight hanger and the point of suspension R = cm

Trial No	Mass inserted on the weight hanger (m)	Distance between point of suspension of scale and weight hanger (r)	Mass of the Scale $M = \frac{mr}{R}$	Mean M
1				
2				
3				
4				
5				
6				

Mass of the Meter Scale = g = kg

RESULT

Mass of the given Meter Scale = kg