

2

(a)

State the two conditions necessary for the equilibrium of a body which is acted upon by a number of forces.

1.

.....

2.

..... [2]

(b)

A uniform rod of weight 80 N is supported by a wall hinge at one end and a cable at the other end, as shown in Fig. 2.1. It makes an angle of 60° with the wall and 50° with the cable. Determine the tension in the cable and the force R on the rod by the wall hinge.

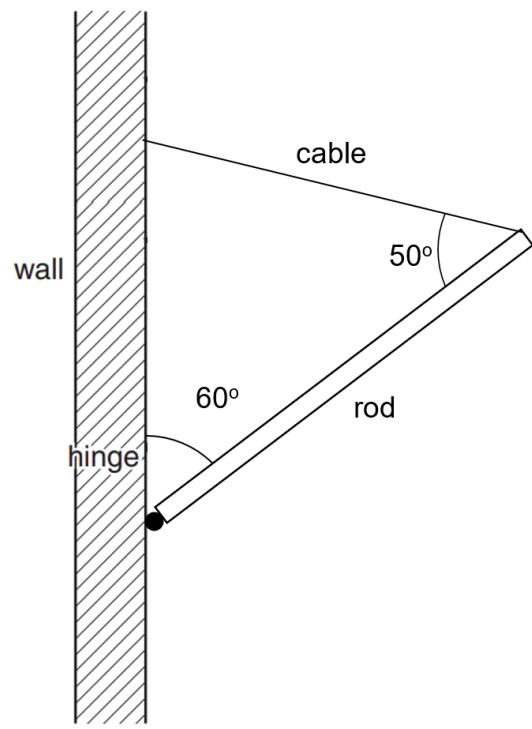


Fig. 2.1

tension = N

magnitude of force R = N

direction of force R from the wall surface = [5]

[Total: 7]