

2 (a) State the two conditions that must be satisfied for a body to be in equilibrium.

For
Examiner's
Use

1.

[View Details](#) | [Edit](#) | [Delete](#)

2.

12

(b) Three co-planar forces act on a body that is in equilibrium.

(i) Describe how to draw a vector triangle to represent these forces.

[3]

.[3]

(ii) State how the triangle confirms that the forces are in equilibrium.

[1]

[1]

- (c) A weight of 7.0 N hangs vertically by two strings AB and AC, as shown in Fig. 2.1.

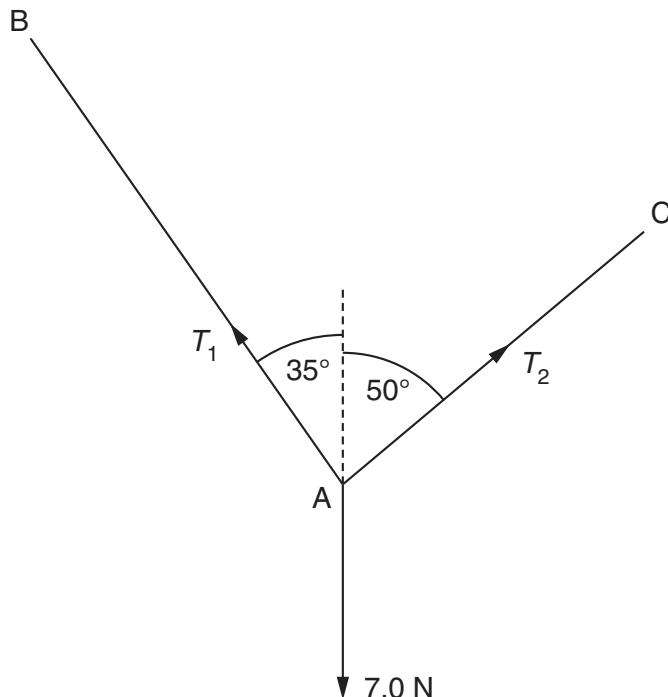


Fig. 2.1

For the weight to be in equilibrium, the tension in string AB is T_1 and in string AC it is T_2 .

On Fig. 2.1, draw a vector triangle to determine the magnitudes of T_1 and T_2 .

$$T_1 = \dots \text{ N}$$

$$T_2 = \dots \text{ N}$$

[3]

- (d) By reference to Fig. 2.1, suggest why the weight could not be supported with the strings AB and AC both horizontal.

.....
.....

[2]