

- 3 A stone on a string is made to travel along a horizontal circular path, as shown in Fig. 3.1.

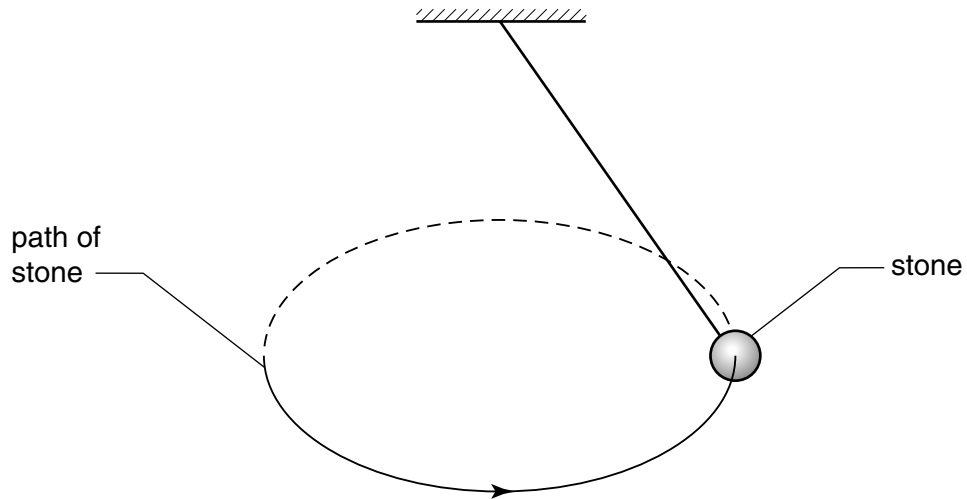


Fig. 3.1

The stone has a constant speed.

- (a)** Define *acceleration*.

.....
..... [1]

- (b)** Use your definition to explain whether the stone is accelerating.

.....
.....
..... [2]

- (c) The stone has a weight of 5.0 N. When the string makes an angle of 35° to the vertical, the tension in the string is 6.1 N, as illustrated in Fig. 3.2.

For
Examiner's
Use

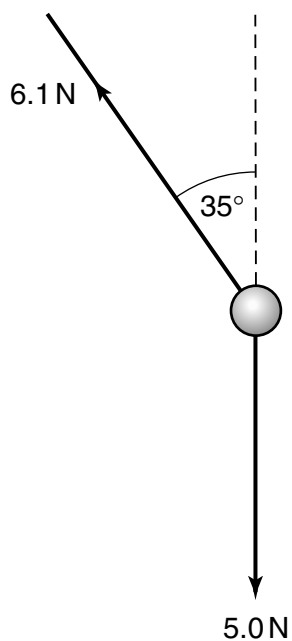


Fig. 3.2

Determine the resultant force acting on the stone in the position shown.

magnitude of force = N

direction of force..... [4]