

**1 (a) (i)** Distinguish between vector quantities and scalar quantities.

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

**(ii)** State whether each of the following is a vector quantity or a scalar quantity.

**1.** temperature

.....[1]

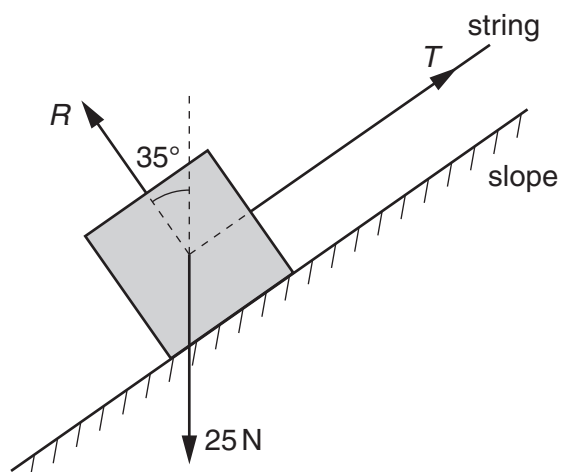
**2.** acceleration of free fall

.....[1]

**3.** electrical resistance

.....[1]

- (b) A block of wood of weight 25 N is held stationary on a slope by means of a string, as shown in Fig. 1.1.



**Fig. 1.1**

The tension in the string is  $T$  and the slope pushes on the block with a force  $R$  that is normal to the slope.

Either by scale drawing on Fig. 1.1 or by calculation, determine the tension  $T$  in the string.

$T = \dots\dots\dots$  N [3]