

Answer **all** the questions in the spaces provided.

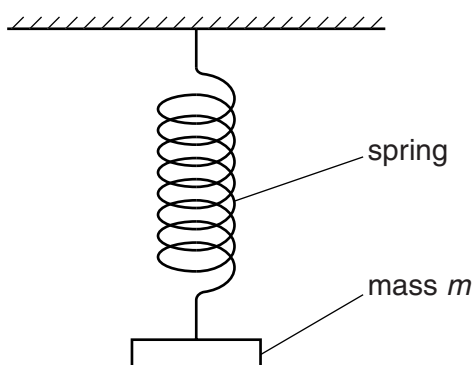
- 1 (a) Mass, length and time are SI base quantities.  
State two other base quantities.

1. ....

2. ....

[2]

- (b) A mass  $m$  is placed on the end of a spring that is hanging vertically, as shown in Fig. 1.1.



**Fig. 1.1**

The mass is made to oscillate vertically. The time period of the oscillations of the mass is  $T$ .

The period  $T$  is given by

$$T = C \sqrt{\frac{m}{k}}$$

where  $C$  is a constant and  $k$  is the spring constant.

Show that  $C$  has no units.

[3]