

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.

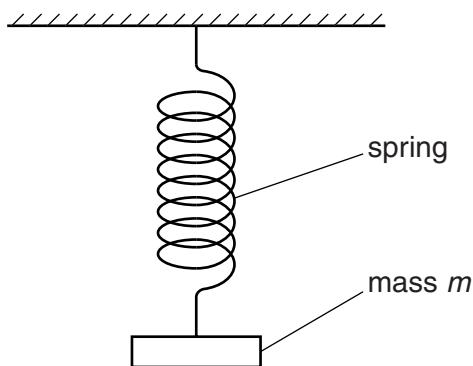


Fig. 1.1

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]