

- 1 The rate of energy transfer  $H$  through a conducting slab is given by

$$H = kA \left| \frac{\Delta T}{l} \right|$$

where the proportionality constant  $k$  is the thermal conductivity of the material,  $A$  is the cross-sectional area of the slab,  $l$  is the length of the slab and  $\Delta T$  is the temperature difference at opposite faces of the slab.

Which of the following is the unit of  $k$  in **base SI units**?

- A  $\text{W m}^{-1} \text{K}^{-1}$
- B  $\text{W m}^{-2} \text{K}^{-1}$
- C  $\text{kg m}^5 \text{s}^{-2} \text{K}^{-1}$
- D  $\text{kg m s}^{-3} \text{K}^{-1}$