

- 4 (a) The first law of thermodynamics may be expressed in the form

$$\Delta U = q + w.$$

Explain the symbols in this expression.

+  $\Delta U$  .....

+  $q$  .....

+  $w$  .....

[3]

- (b) (i) State what is meant by *specific latent heat*.

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[3]

- (ii) Use the first law of thermodynamics to explain why the specific latent heat of vaporisation is greater than the specific latent heat of fusion for a particular substance.

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[3]