

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

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

Explain the symbols in this expression.

+ ΔU
+ q
+ w [3]

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

.....
.....
.....
..... [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.

.....
.....
.....
..... [3]