3 **(a)** Define specific latent heat.

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..... [2]

(b) Explain why, for a substance, the specific latent heat of vaporisation is usually greater than the specific latent heat of fusion.

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..... [3]

(c) An ice cube of mass 37.0 g at temperature 0.0 °C is placed in a beaker containing water of mass 208 g at temperature 26.4 °C.

When all the ice has melted, and all the water in the beaker has reached thermal equilibrium, the final temperature of all the water is 10.3 °C.

The specific heat capacity of water is $4.18\,J\,g^{-1}\,°C^{-1}$.

The beaker has negligible specific heat capacity and is perfectly insulated from the surroundings.

Determine a value, to three significant figures, for the specific latent heat of fusion of water.

specific latent heat of fusion = ... $J\,g^{-1}$ [4]

[Total: 9]