Section A

For Examiner's Use

Answer **all** the questions in this section.

1 **(a)** State what is meant by *latent heat of vaporisation.*

.....

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.....[2]

(b) A student carries out an experiment to determine the specific latent heat of vaporisation of water.

Water is boiled in a beaker by means of an electric heater, as shown in Fig. 1.1.

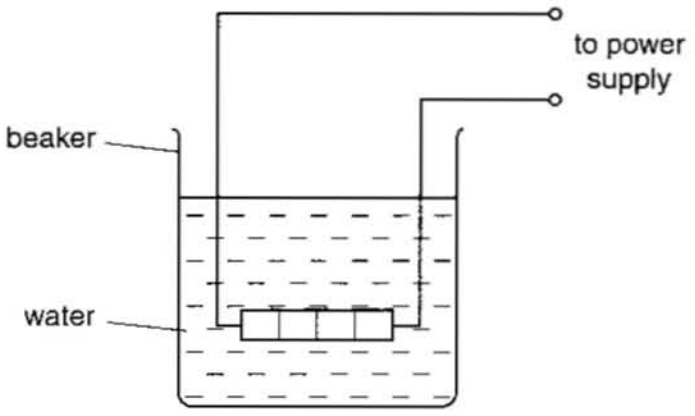

Fig. 1.1

The power P supplied to the heater is measured. When the water is boiling at a constant rate, the mass m of water evaporated in 5.0 minutes is determined.

Data for the power P and the mass m for two different values of P are shown in Fig. 1.2.

P / W	m / g
140	14.1
95	8.2

Fig. 1.2

(i) Suggest why, in order to obtain a reliable result for the specific latent heat, the mass m is determined for two different values of P.

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.....[1]

(ii) Calculate the value for the specific latent heat L of vaporisation.

L = ... Jg^{-1} [3]

[Turn over