5 **(a)** Explain how the photoelectric effect provides evidence for the particulate nature of electromagnetic radiation.

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.....[3]

(b) Monochromatic light of constant intensity is incident on the photocell in the circuit of Fig. 5.1. The voltage applied to the photocell is varied and the current measured.

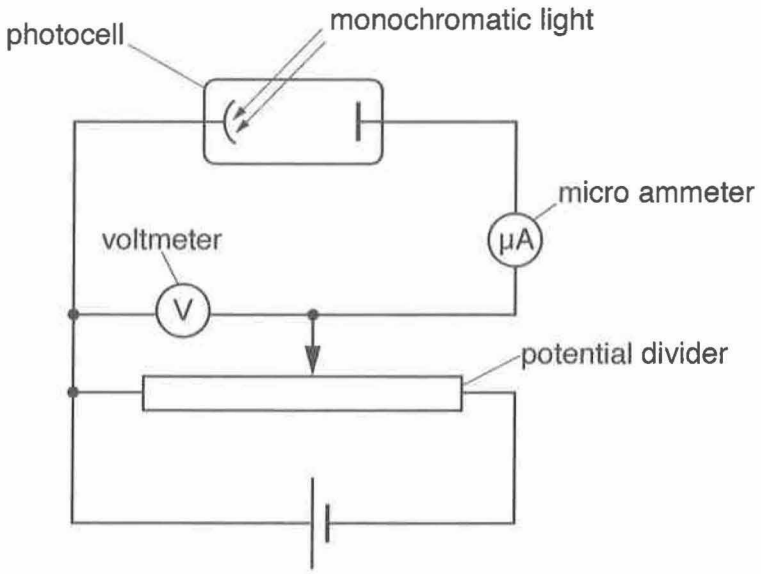

Fig. 5.1

Fig. 5.2 shows how the current varies with the applied voltage.

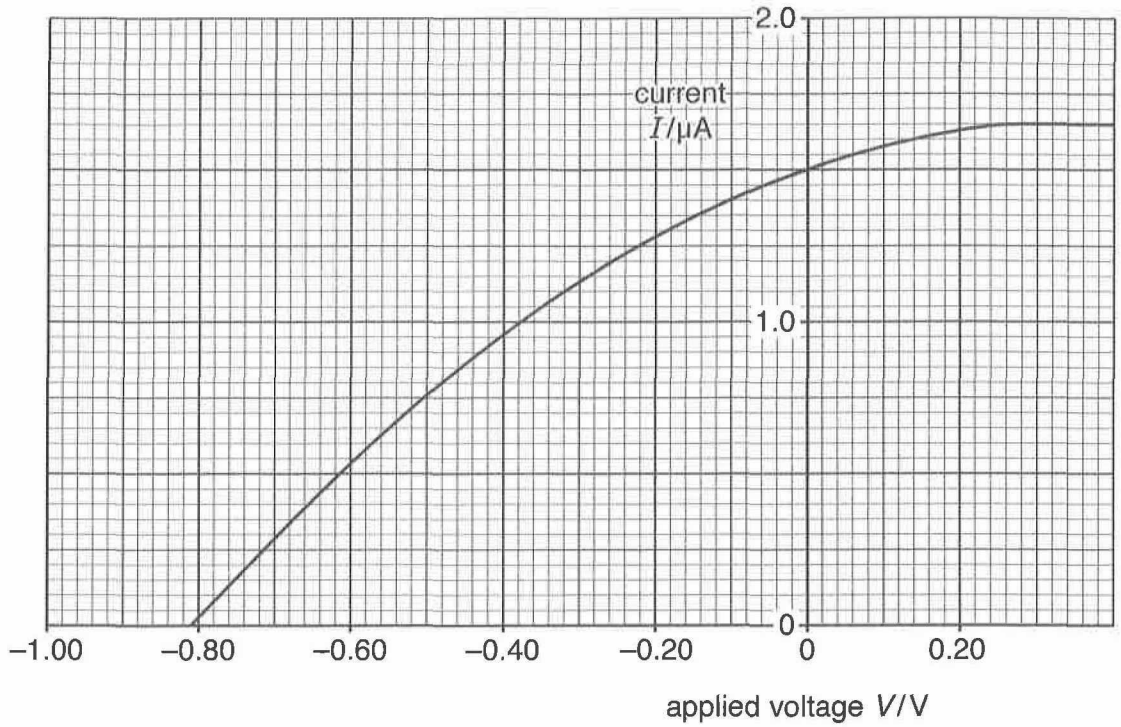

Fig. 5.2

Use Fig. 5.2 to calculate the maximum kinetic energy, in joules, of the emitted photoelectrons.

kinetic energy = ... J [3]

[Total: 6]