

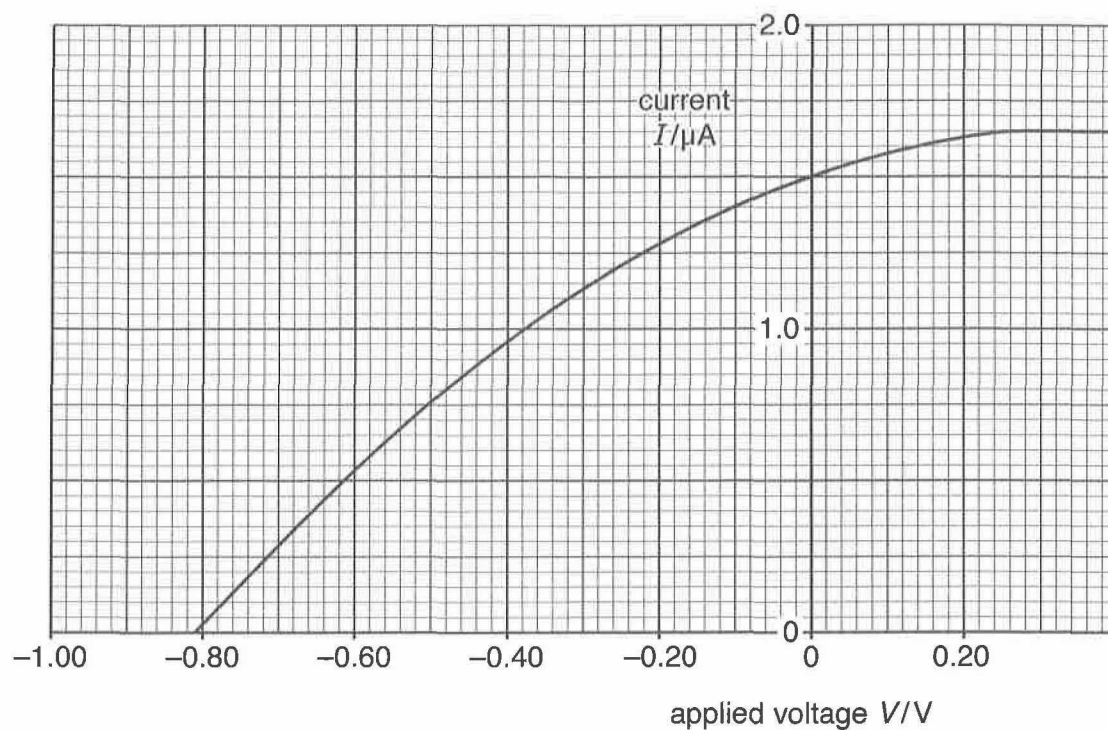
- [3]

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- The diagram shows a circuit for measuring the photoelectric effect. A battery is connected in series with a microammeter (labeled  $\mu\text{A}$ ) and a photocell. The photocell is represented by a rectangle with a curved arrow and a vertical line inside. Monochromatic light is incident on the curved arrow. A voltmeter (labeled  $\text{V}$ ) is connected in parallel across the photocell. A potential divider, represented by a horizontal rectangle, is connected in parallel with the voltmeter. An arrow points from the voltmeter to the potential divider, indicating that the voltmeter measures the potential difference across the divider.

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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]

