

- 6 (a)** In the space below draw a diagram of the setup used to demonstrate the photoelectric effect, and use it to explain how the photoelectric effect provides evidence for the particulate nature of electromagnetic radiation.

..... [4]

(b) State, with a reason, what modifications to the apparatus in the setup in **(a)** would be required, separately, to increase

(i) the energy of a photoelectron,

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..... [1]

(ii) the rate of production of photoelectrons.

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..... [2]

(c) Describe and explain an experiment that gave rise to a model for the wave nature of light.

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..... [3]

[Total: 10]

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