

- 8 (a)** Explain why, for the photoelectric effect, the existence of a threshold frequency and a very short emission time provide evidence for the particulate nature of electromagnetic radiation, as opposed to a wave theory.

For  
Examiner's  
Use

- (b)** State and explain two relations in which the Planck constant  $h$  is the constant of proportionality.

1. ....

2. ....

[6]