

- 10 (a)** A metal surface is illuminated with light of a single wavelength  $\lambda$ .  
 On Fig. 10.1, sketch the variation with  $\lambda$  of the maximum kinetic energy  $E_{\text{MAX}}$  of the electrons emitted from the surface.  
 On your graph mark, with the symbol  $\lambda_0$ , the threshold wavelength.

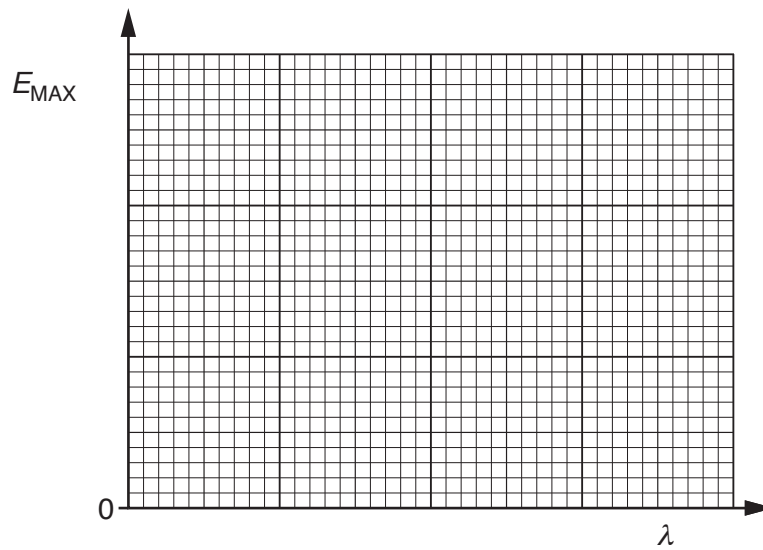


Fig. 10.1

[3]

- (b)** A neutron is moving in a straight line with momentum  $p$ .  
 The de Broglie wavelength associated with this neutron is  $\lambda$ .  
 On Fig. 10.2, sketch the variation with momentum  $p$  of the de Broglie wavelength  $\lambda$ .

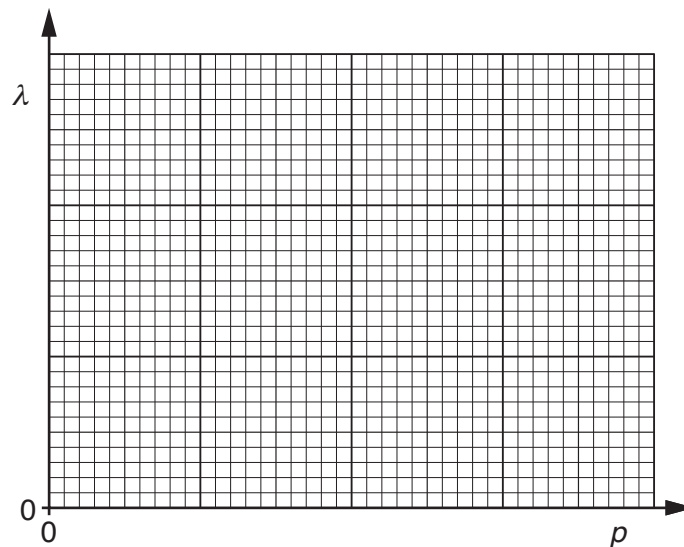


Fig. 10.2

[2]

[Total: 5]