Explain why electrons in atoms occupy discrete energy levels rather than being able to possess any possible energy below that required for ionisation.	Mark 2
A certain pigment is found to have an electronic excitation energy of $4.97 \times 10^{-19}$ J. What is the wavelength at which this molecule will absorb radiation?	3
ANSWER:	
What colour do you expect this pigment to be? Explain your answer.	
	A certain pigment is found to have an electronic excitation energy of 4.97 × 10 <sup>-19</sup> J. What is the wavelength at which this molecule will absorb radiation?  ANSWER: