Question Number	Answer		Mark
15(a)	Some of the pulse passes/refracts through crack A (Some of the pulse) reflects from crack (B) Because the density/material/medium of the crack will be different (to the metal)	**(1)** **(1)** **(1)**	**3**
15(b)	Use of speed = distance / time Correct factor of 2 in converting time or distance Depth = 4.1 cm / 0.041 m, hence crack A Example of calculation Distance = speed × time = 5900 m s^{-1} × $\frac{1.4 \times 10^{-5} s}{2}$ = 0.041 m	**(1)** **(1)** **(1)**	**3**
15(c)	Higher frequency means lower wavelength Therefore greater level of detail possible (MP1 – allow converse statement i.e. "lower frequency means greater wavelength") (MP2 - allow reference to greater resolution or that smaller objects can be seen)	**(1)** **(1)**	**2**
	Total for question 15		**8**