

Question number	Answer	Notes	Marks
6 (a)	a microphone; a loudspeaker;		2
b i	$v = f \times \lambda$ ;	in words or accepted symbols any rearranged form	1
ii	changing kHz into Hz; substitution; evaluation; e.g. $12\,000 = 12\,000\,000$ $v = 25 \times 12\,000\,000$ $300\,000\,000 \text{ (m/s)}$	seen anywhere          $3.0 \times 10^8 \text{ (m/s)}$ POT error loses the conversion mark	3

**Total 6 marks**