Question Number	Answer		Mark
12a	**Either** Ultrasound is (partially) reflected (from boundaries) (Measure) the time taken or time delay (for signal to return) Calculate expected time for pulse to return (if no air gap) **Or** Compare to known time for pulse to return If time for pulse to return < time calculated, air gap is present **Or** Ultrasound is (partially) reflected (from boundaries) (Measure) the time taken or time delay (for signal to return) Calculate distance for pulse to travel If distance pulse returns from < thickness of RSJ, air gap is present **Or** If distance pulse returns from = thickness of RSJ, no air gap	(1) (1) (1) (1) (1) (1) (1) (1)	**4**
12b	(Higher frequency) gives smaller wavelength (Smaller wavelength leads to) high level of detail/resolution (Smaller wavelength) can detect small(er) objects/gaps **Or** (With 20kHz) the detail would not be sufficient to identify air gaps **Or** (With 20kHz,) air gaps might be smaller than the wavelength	(1) (1) (1)	**3**
	Total for question 12		**7**