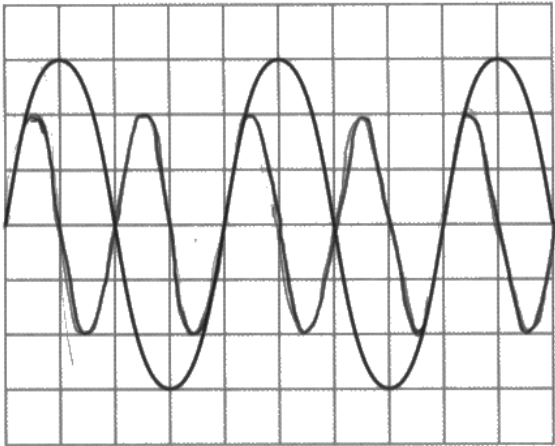


Question number	Answer	Notes	Marks
5 (a)	20 (Hz) to 20 000 (Hz);;	one mark for each end of the range correct allow 20 kHz for 20 000 Hz	2
(b) (i)	microphone;		1
(ii)	any 3 of: MP1. adjust the oscilloscope to get a steady trace / eq; MP2. adjust time base / oscilloscope to give a minimum of 1 complete cycle (on the screen); MP3. measure number of squares for a number of complete cycles / waves; MP4. multiply number of squares by the time base / eq. (to find T); MP5. use $f = 1/T$;	ignore references to wavelength, amplitude, finding number of waves passing a point allow 'measure/find the time period / time for one wave' if neither MP3 or MP4 scored	3
(iii)	amplitude smaller throughout; <u>double</u> the original frequency throughout; 	ignore vertical position of waveform	2

Total for question 5 = 8 marks