Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic : Waves

Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Mark Schemes

Q1.

Question Number	Answer	Acceptable answers	Mark
(a)(i)	an explanation linking: • frequency / Hz (1) • above 20 000 (1)	Pitch too high to be heard by the man "it is above 20kHz" 2 marks "The frequency is too loud" gets 1st mark	**(2)**

Question Number	Answer	Acceptable answers	Mark
(a)(ii)	substitution: (1) 140/0.42 evaluation: (1) 330 m/s (1)	award full marks for correct answer with no working allow 333(.333) independent mark allow ms^{-1}	**(3)**

Question Number	Answer	Acceptable answers	Mark
(b)(i)	A infrasound wave (1)		**(1)**

Question Number	Answer	Acceptable answers	Mark
(b)(ii)	• arrows to show vibration in opposite directions (1) • parallel to arrow on diagram (1)	arrows do not have to go through R horizontal and vertical – no marks multiple directions – no marks	**(2)**

Question Number	Answer	Acceptable answers	Mark
(c)	Explanation linking: • convection (currents) (1) • in mantle (1)	Accept answers in form of a labelled diagram in molten rock in magma below plates in the hot rock coming from the core under Earth's crust under surface ignore lava clear unlabelled diagram scores maximum 1 mark clear labelled diagram scores maximum 2 marks	**(2)**

Q2.

Question Number	Answer	Additional guidance	Mark
	recall (1) $v = \frac{x}{t}$ rearrangement (1) $t = \frac{x}{v}$ substitution (1) $\frac{14 \times 2}{1600}$ evaluation (1) 0.018 (s)	substitution and rearrangement in either order max 3 marks if 14 used as distance accept numbers that round to 0.018 e.g. 0.0175 (s) award full marks for the correct answer with no working	**(4)** AO 1 1 AO 2 1

Q3.

Question Number	Answer	Additional guidance	Mark
	an explanation linking: (the colours have) different wavelengths (1) different wavelengths / colours travel at different speeds (1) so refract by different amounts (1)	 allow the word frequencies for wavelengths for refract allow bend/change direction/follow different path	**(3)** AO 2 1