Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic : 7_ Astronomy

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

Mark Schemes

Q1.

Question number	Answer	Additional guidance	Mark
(i)	$\frac{10 \times 46}{(100)}$ (1) (time=) 4.6 (billion years) (1)	accept 4 600 000 000 4.6×10^9 award one mark for power of ten error award one mark for answer of 5.4 or 5 400 000 000 or 5.4×10^9 (has found time remaining with no power of ten error) award full marks for the correct answer without working	**2** **AO2.1**

Question number	Answer	Additional guidance	Mark
(ii)	a description to include any **two** from {volume/ diameter/radius/ size} changes (1) (Sun becomes) a red giant (1) cools down (1) (eventually becomes) a white dwarf (1)	 ignore explode / implode do not accept red super giant / supernova lose heat (energy) accept black dwarf	**2 AO2.1**

Q2.

	Answer	Additional guidance	Mark
(i)	(1.98-1.86) = (+/-) 0.12		**(1)** **AO2**

	Answer	Additional guidance	Mark
(ii)	(velocity =) $\frac{330 \times 0.12}{1.86}$ (1) (+/-) 21.3 (m/s) (1)	ecf from 10ai accept numbers that round to 21 (m/s) award 1,2 marks for (i) and (ii) for the correct answer for (ii) even without working	**(2)** **AO2**

Q3.

Question number	Answer	Additional guidance	Mark
	substitution (1) $\frac{3.4\ (\times 10^{29})}{2.0\ (\times 10^{30})}$ evaluation (1) 0.17	award 1 mark for 1.7 to any incorrect power of 10 ignore any units given award full marks for the correct answer without working	**(2)**

Q4.

	Answer	Additional guidance	Mark
(i)	substitution (1) 12 x 10 evaluation (weight =) 120 (N)		(2) AO2

	Answer	Additional guidance	Mark
(ii)	rearrangement (1) $(g) = \frac{W}{m}$ substitution (1) $\frac{20}{12}$ evaluation (1) (g on Moon =)1.7 (N/kg)	rearrangement and substitution in either order accept answers that round to 1.7 e.g. 1.67 (N/kg) award full marks for the correct answer without working 1.6 scores 2 marks 240 scores 1 mark 0.6 scores 1 mark 20 × 12 scores 1 mark $\frac{12}{20}$ scores 1 mark	(3) AO3

Q5.

Question number	Answer	Additional guidance	Mark
(i)	1900 (N)	allow 1862 1864 190 × 10 190 × 9.8(1)	**(1)**

Question number	Answer	Additional guidance	Mark
(ii)	rearrangement (1) $\frac{700}{190}$ evaluation (1) 3.7 (N/kg)	 (g =) $\frac{W}{m}$ allow numbers that round up to 3.7 (N/kg) award full marks for the correct answer without working	**(2)**