Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic :15_Forces and their matter

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

Mark Schemes

Q1.

Question number	Answer	Additional guidance	Mark
i	6.5 (1) m (1)	 metres / meters allow M independent marks	(2)

Question number	Answer	Additional guidance	Mark
ii	the pressure increases		(1)

Question number	Answer	Additional guidance	Mark
iii	there is additional pressure due to the atmosphere		(1)

Q2.

Question Number:	Answer	Mark
(i)	70 (kPa)	(2) AO 3 1a

Question Number:	Answer	Mark
(ii)	between 46 and 48 (kPa)	(1) AO 3 1a

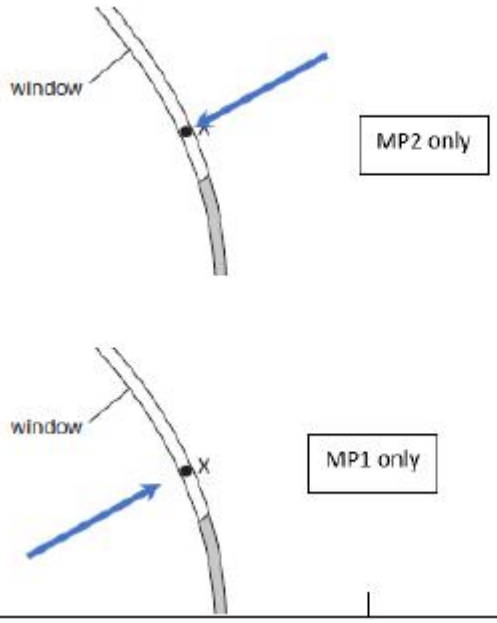
Question Number:	Answer	Additional guidance	Mark
(iii)	any one from: the atmosphere gets less dense / thinner / has fewer molecules (as height above sea level increases) (1) or there is less air/oxygen (as the height above sea level increases)(1)	 accept particles less weight pushing down	(1) AO 1 1

Q3.

Question number	Answer	Additional guidance	Mark
(i)	(80 000 – 23 000) 57 000 (Pa) (1)	 -57 000 (Pa)	**(1)** **AO2**

Question number	Answer	Additional guidance	Mark
(ii)	substitution (1) 80 000 = $\frac{F}{0.094}$ rearrangement and evaluation (1) (F=) 7500 (N)	alternative method re-arrangement (1) (F =) P x A **or** (F=) 80 000 x 0.094 (substitution and) evaluation (1) accept 7520 (N), award full marks for correct answer without working. allow 1 mark max for substitution using pressure of 57 000 **or** an answer that rounds to 5400 e.g. 5358 (calculated net force)	**(2)** **AO2**

Question number	Answer	Additional guidance	Mark
(iii)	force is less (on small window) (1) pressure is the same (1)	force is greater on large window	**(2)** **AO1**

Question number	Answer	Additional guidance	Mark
(iv)	arrow pointing towards outside of aeroplane (1) arrow is normal to surface at X (judge by eye) (1)	may be inside or outside of aeroplane. need not touch X do not award if two or more conflicting arrows drawn must touch X or dot at X independent marks	**(2)** **AO1**
	Examples:  		

Q4.

Question number	Answer	Additional guidance	Mark
(i)	substitution (1) $\frac{300}{0.75}$ evaluation (1) 400 (Pa)	Award full marks for correct answer without working	(2)

Question number	Answer	Mark
(ii)	**D** N/m^2	(1)