Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic : 15_Forces And Matter

Name of the Student:_____
Max. Marks : 20 Marks **Time : 20 Minutes**

Mark Schemes

Q1.

Question number	Answer	Additional guidance	Mark
	two similarities such as: (2) • both use the same loads • both start/end with same extension • both return to original length **two differences such as:** (2) • extensions for spring and rubber band differ • spring - loading and unloading are the same – rubber band different • extension- spring linear, rubber band non-linear	go up evenly/even steps steps uneven	**(4)**

Q2.

Question number	Answer	Additional guidance	Mark
i	 D A and B are incorrect because they only show one force C is incorrect because the forces are in the wrong direction		(1)

Question number	Answer	Additional guidance	Mark
ii	substitution (1) (F =) 20 x (0.0)7 evaluation (1) 1.4 (N)	award full marks for the correct answer without working allow 1 mark max for POT error	(2)

Q3.

Question number	Answer	Additional guidance	Mark
(a)	evidence that anomalous reading excluded (1) answer (1) average length = 20.31 (mm)	accept 101.57 (÷5) for first mark accept 20.314 (mm)	(2)

Question number	Answer	Additional guidance	Mark
(b)(i)	• Axes with linear scales that use more than half of each edge of the grid and labelled with units from table (1) • All points correctly plotted to ± half a square (1) • Single straight line passing through all points and the origin (1)	allow 1 mark if only one plotting error and correct line drawn for points plotted	(3)

Question number	Answer	Additional guidance	Mark
(b)(ii)	A comment that makes reference to the following points: (using table) • idea that equal increments of force/weight/mass cause equal increments of extension (1) • correct reference to figures in the table (1) OR (using graph) • the graph line is straight (1) • the graph line passes through the origin (1) AND therefore the student's conclusion is correct (1)	last marking point can only be achieved if at least one of the other two marks is awarded	(3)

Q4.

Question number	Answer	Additional guidance	Mark
(i)	An answer that combines the following to provide a logical description of the method • measure unstretched length of spring (1) • measure stretched length of spring (1) • subtract (1)	 set unstretched position at 0 read stretched position use a ruler	(3)

Question number	Answer	Additional guidance	Mark
(ii)	substitution (1) $\frac{1.5}{30}$ evaluation (1) 0.05 (N/mm)	award full marks for correct answer without working 50 N/m allow power of 10 (POT) error for 1 mark	(2)