Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic : 9_Forces and their effect

Name of the Student:_____
Max. Marks : 14 Marks **Time : 14 Minutes**

Mark Schemes

Q1.

Question Number:	Answer	Additional guidance	Mark
(i)	an explanation linking: wheel rubs on axle (as it rotates) OR friction (between the wheel and the axle) (1) causes heating/transfer of (thermal) energy/ work being done (1)	 allow generates heat	**(2)** AO 1 1

Question Number:	Answer	Additional guidance	Mark
(ii)	any one from: lubrication/oil (1) (ball) bearings / ball-race (1) go slower (1)	 anything that lubricates – grease etc.	**(1)** AO 1 1

Q2.

Question Number:	Answer	Additional guidance	Mark
(i)	an explanation linking: wheel rubs on axle (as it rotates) OR friction (between the wheel and the axle) (1) causes heating/transfer of (thermal) energy/ work being done (1)	 allow generates heat	**(2)** AO 1 1

Question Number:	Answer	Additional guidance	Mark
(ii)	any one from: lubrication/oil (1) (ball) bearings / ball-race (1) go slower (1)	 anything that lubricates – grease etc.	**(1)** AO 1 1

Q3.

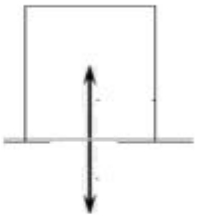
Question Number:	Answer	Mark
(i)	A anticlockwise, slower than gear Q **The only correct answer is A** ***B*** *is not correct as P is the larger gear and can only move slower than gear Q and anticlockwise* ***C*** *is not correct as gear P must be moving anticlockwise as gear Q is moving clockwise* ***D*** *is not correct as gear P must be moving anticlockwise as gear Q is moving clockwise*	**(1)** AO 3 2a

Question Number:	Answer	Mark
(ii)	C 3:2 **The only correct answer is C** ***A*** *is not correct as it is a subtraction* ***B*** *is not correct as it is an addition* ***D*** *is not correct as it gives the ratio of teeth on Q to teeth on P*	**(1)** AO 1 2

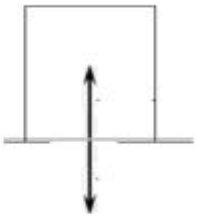
Q4.

Question number	Answer	Additional guidance	Mark
	identification of clockwise and anticlockwise moment (1)		**(2)**
	3(.0) x 5(.0) (/100) 6.0 x 2.5 (/100)	15 and 15 seen or 0.15 and 0.15 seen Accept Y is half the force (as Z) but twice the distance (from the pivot as Z) for this mark	**AO2**
	values (of both moments) are equal (1)	may be implied by = sign (turning effect) of the two forces are equal	

Q5.

Question Number:	Answer	Additional guidance	Mark
	 arrowed line vertically downwards (anywhere) (1) same length as vertical arrow upwards (1)	more than one line drawn 1 mark maximum judge by eye	**(2)** AO 1 1

Q6.

Question Number:	Answer	Additional guidance	Mark
	 arrowed line vertically downwards (anywhere) (1) same length as vertical arrow upwards (1)	more than one line drawn 1 mark maximum judge by eye	**(2)** AO 1 1