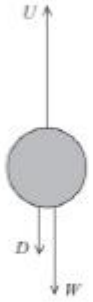
Practice Question Set For A-Level
Subject : Physics
Paper-1 Topic : 2 (Mechanics)

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

Mark Schemes

Q1.

Question Number	Answer	Mark
	C  	**1**
	Incorrect Answers: A – this is the diagram for a bead moving downwards with a constant velocity B – this is the diagram for a bead moving upwards with a decreasing velocity D – this is the diagram for a bead moving downwards with a decreasing velocity	

Q2.

Question Number	Answer	Mark
	D	**1**
	Incorrect Answers: **A** – both sections of graph incorrect **B** – both sections of graph incorrect **C** – second section of graph incorrect	

Q3.

Question Number	Acceptable Answers	Reject	Mark
	C		**1**

Q4.

Question Number	Acceptable Answers	Reject	Mark
	D		**1**

Q5.

Question Number	Answer	Mark
	C $vt \sin 35°$	**1**
	Incorrect Answers: A – correct formula but initial vertical velocity and not horizontal velocity used B – incorrect formula used with initial vertical velocity D – incorrect formula used with initial horizontal velocity	

Q6.

Question Number	Answer	Mark
	D	**1**

Q7.

Question Number	Answer	Mark
	D	**1**

Q8.

Question Number	Answer	Mark
	D 1×10^{17} **J**	**1**
	A – this answer is incorrect B – this answer is incorrect C – this answer is incorrect	

Q9.

Question Number	Answer	Mark
	D	**1**

Q10.

Question Number	Answer	Mark
	C $\frac{1}{2}mg\Delta x$	1
	Incorrect Answers: A – no factor of $\frac{1}{2}$ B – incorrect equation and no factor of $\frac{1}{2}$ D – incorrect equation	

Q11.

Question Number	Acceptable answers	Additional guidance	Mark
	C	*mgh*	1
	A uses the distance AB rather than height B uses a component of height D uses a component of height		

Q12.

Question Number	Acceptable answers	Additional guidance	Mark
	D		1

Q13.

Question Number	Acceptable answers	Additional guidance	Mark
	The only correct answer is B A is not the correct answer, as $2Q/(2d)^2$ simplifies to $F/2$. C is not the correct answer, as $2Q/(2d)^2$ simplifies to $F/2$. D is not the correct answer, as $2Q/(2d)^2$ simplifies to $F/2$.		1

Q14.

Question Number	Acceptable answers	Additional guidance	Mark
	B		1

Q15.

Question Number	Acceptable answers	Additional guidance	Mark
	B The two forces acting on the mass are its weight (vertically down) and a tension in the thread.		1
	A assumes there is a centripetal force only C assumes there is an additional centripetal force D assumes the additional centripetal force acts away from the centre of the circle		

Q16.

Question Number	Acceptable Answers	Reject	Mark
	C		1

Q17.

Question Number	Answer	Mark
	C	1

Q18.

Question Number	Acceptable answers	Additional guidance	Mark
	The only correct answer is A B is not correct as these forces are not in equilibrium C is not correct as these forces are not in equilibrium D is not correct as these forces are not in equilibrium		**1**

Q19.

Question Number	Answer	Mark
	A	1

Q20.

Question Number	Answer	Mark
	A	1