Practice Question Set For A-Level
Subject : Physics
Paper-1 Topic : 6_ Further Mechanics

Name of the Student:_____
Max. Marks : 21 Marks **Time : 21 Minutes**

Mark Schemes

Q1.

Question Number	Acceptable answers	Additional guidance	Mark
	The only correct answer is D A is not the correct answer, as change in momentum is the same. B is not the correct answer, as change in velocity is the same. C is not the correct answer, as force decreases.		1

Q2.

Question Number	Acceptable answers	Additional guidance	Mark
	The only correct answer is D **314**	A, B and C all contain numerical errors	1

Q3.

Question Number	Answer	Mark
	B	1

Q4.

Question Number	Answer	Mark
	C	1

Q5.

Question Number	Acceptable answers	Additional guidance	Mark
	The only correct answer is A B *is not correct because these are base units of force* C *is not correct because these are not base units* D *is not correct because these are not base units*	kg m s^{-1}	1

Q6.

Question Number	Answer	Mark
	D	1

Q7.

Question Number	Answer	Mark
	B	1

Q8.

Question Number	Answer	Mark
	B	1

Q9.

Question Number	Answer	Mark
	C	1

Q10.

Question number	Acceptable answers	Additional guidance	Mark
	B		1

Q11.

Question Number	Answer	Mark
	B	1

Q12.

Question Number	Answer	Mark
	C	1

Q13.

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		

Q14.

Question Number	Answer	Mark
	C	1

Q15.

Question Number	Answer	Mark
	B	1

Q16.

Question Number	Answer	Mark
	D	1

Q17.

Question Number	Answer	Mark
	A	1

Q18.

Question Number	Acceptable answers	Additional guidance	Mark
	The only correct answer is A B is not the correct answer, as angular velocity = $5 \times 2\pi/20$ C is not the correct answer, as angular velocity = $5 \times 2\pi/20$ D is not the correct answer, as angular velocity = $5 \times 2\pi/20$		1

Q19.

Question Number	Acceptable answers	Additional guidance	Mark
	The only correct answer is D A is not the correct answer, as centripetal force keeps car moving with circular motion B is not the correct answer, as centripetal force keeps car moving with circular motion C is not the correct answer, as this would keep car moving with circular motion		1

Q20.

Question Number	Acceptable answers	Additional guidance	Mark
	The only correct answer is B *A is not correct because this is not dimensionally correct* *C is not correct because* $^{E_k}/_{2p} = {}^{v}/_{4}$ *D is not correct because this is not dimensionally correct*		**1**

Q21.

Question Number	Answer	Mark
	B	**1**