

Q7.

Question Number	Acceptable answer	Additional guidance	Mark
	D	The only correct answer is D: velocity is maximum when displacement is zero, and vice versa, and has positive and negative values since the direction reverses A is not correct because this shows maximum velocity when it should be minimum and vice versa B is not correct because this shows maximum velocity when it should be minimum and vice versa C is not correct because this does not show the change in direction of velocity during an oscillation	1

Q8.

Question Number	Answer	Mark
	C	1

Q9.

Question Number	Answer	Mark
	The only correct answer is B because acceleration is proportional to force, so the acceleration graph would have the shape of the force graph. The acceleration at the start is zero, so the velocity graph must have an initial gradient of zero. For the acceleration to be positive in the first quarter cycle the velocity must be increasing. This graph has an initial gradient of zero and increasing velocity. A the initial gradient is not zero C the initial gradient is not zero D the velocity in the first quarter cycle is decreasing	1

Q10.

Question Number	Acceptable answers	Additional guidance	Mark
	The only correct answer is D because velocity is equal to the gradient of the displacement-time graph A is not correct because velocity is equal to the gradient of the displacement-time graph, but here velocity is shown as proportional to -1 times the displacement B is not correct because velocity is equal to the gradient of the displacement-time graph, but here velocity is shown as -1 times the gradient C is not correct because velocity is equal to the gradient of the displacement-time graph, but here velocity is shown as proportional to the displacement		1