Question Number	Answer		Mark
14(a)(i)	Same time period as velocity **and** constant amplitude	(1)	
	Wave shifted a quarter cycle to the right [i.e. a positive sine wave, displacement is zero at time zero.]	(1)	**2**
14(a)(ii)	T = 2.0 s from graph	(1)	
	Use of $T = 2\pi\sqrt{\frac{\ell}{g}}$ (accept any value of T that could be read from the graph)	(1)	
	$\ell = 0.99$ m	(1)	**3**
	Example of calculation $2.0\text{ s} = 2\pi\sqrt{\frac{\ell}{9.81\text{ m s}^{-2}}}$ $\ell = \frac{(2.0\text{ s})^2 \times 9.81\text{ m s}^{-2}}{4\pi^2} = 0.994\text{ m}$		
14(b)	**EITHER**		
	Suitable data logger application identified	(1)	
	Reason why data logger is an advantage in this situation	(1)	
	OR		
	Max 2 from		
	When data has to be collected over a very short time interval	(1)	
	When multiple data sets have to be collected simultaneously	(1)	
	When data has to be collected over a very long time interval	(1)	**2**
	Total for question 14		**7**