Name of the Student:_____
Max. Marks : 12 Marks **Time : 12 Minutes**

Mark Schemes

Q1.

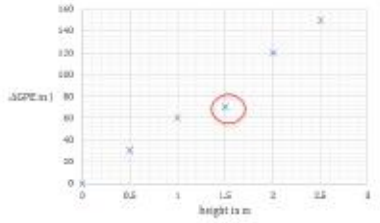
	Answer	**Acceptable answers**	**Mark**
(i)	B it decreases		**(1)**
(ii)	C it does not change		**(1)**

Q2.

	Answer	**Acceptable answers**	**Mark**
(i)	Substitution: (1) 60 × 10 × 50 or 600 × 50 Evaluation: (1) 30 000 Unit: (1) J / Nm	give two marks for correct answer no working j / joule 30 kJ for full marks	**(3)**
(ii)	After falling 50 m / when the cord becomes straight/when cord starts to stretch	tension starting to increase at terminal velocity ignore maximum velocity/speed	**(1)**
(iii)	An explanation linking any two of not all GPE is transferred to KE (1) some of the GPE transfers to thermal energy /work is done (1) due to drag (1)	not all GPE goes to KE maximum energy is same (value) as GPE before falling /speed does not reach the speed at which he should fall some lost as heat/sound (of rope or movement through air) (air) resistance / friction ignore wind	**(2)**

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Q3.

Question	Answer	Additional guidance	Mark
(i)	circle around (1.5, 70) (1)		(1) AO3.1

Question	Answer	Additional guidance	Mark
(ii)	correct value of ΔGPE from the graph (1) 120 substitution (1) $\frac{(120)}{5}$ evaluation (1) 24 (W)	 (power =) $\frac{\text{their value of energy}}{5}$ their energy value must be a number between 0 and 160	(3) AO3.2
		evaluation of $\frac{\text{their value of energy}}{5}$ award full marks for the correct answer without working	

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