Name of the Student:_____

Max. Marks : 12 Marks **Time : 12 Minutes**

Mark Schemes

Q1.

Question Number	Answer	Additional guidance	Mark
(i)	bioenergy	biofuel / biomass	**(1)** AO 3 1b

Question Number	Answer	Additional guidance	Mark
(ii)	largest area / fraction / percentage (idea)	**must be referring to the chart,** not just repeating 4bi stem- can't have greatest/ largest amount by itself	**(1)** AO 3 1b

Question Number	Answer	Additional guidance	Mark
(iii)	wind		**(1)** AO 3 1b

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Q2.

Question number	Answer	Additional guidance	Mark
(i)	thermal (energy/store) (1)	energy dissipated energy wasted energy lost energy transferred to surroundings energy transferred due to friction energy transferred due to air resistance allow heat (energy) ignore sound/not useful energy	**1** **AO2.1**

Question number	Answer	Additional guidance	Mark
(ii)	30 (J) (1)	accept -30	**1** **AO2.1**

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Question number	Answer	Additional guidance	Mark
(iii)	substitution (1) 950 (x100) 980 evaluation (1) 0.97 OR 97%	 allow answers that round to 0.97 or 97% for 2 marks allow 1 mark for answers that round to 97 or 0.97% allow 1 mark for answers of 0.96 or 96% (truncated) award full marks for correct answer without working	**2** **AO2.1**

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Q3.

Question number	Answer	Additional guidance	Mark
	(original) GPE – KE (at bottom) (1)	allow (idea of) input – output allow wrong way round (eg output-input)	**(1)**

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Q4.

Question number	Answer	Additional guidance	Mark
	(vertical) height of slope (1) mass (of the toy car) (1)	 allow (in this context) weight if no other mark scored allow 1 mark for quoting either equation (Δ)GPE =mgh OR KE = ½ mv²	**(2)**

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Q5.

Question number	Answer	Additional guidance	Mark
	any **two** from reduce air resistance (1) lubricate (wheels) (1) push off (1)	 be more aerodynamic crouch down	**2** **AO1.1**

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