Question number	Answer	Notes	Marks
8 (a)	take repeats and find the mean;	allow 'average' for 'mean'	1
(b)	any two from: MP1. mass (being lifted); MP2. height (lifted) / distance; MP3. power supply / circuit being used; MP4. temperature (of motor);	ignore 'same motor' condone weight	2
(c)	conversion of cm to m; substitution into GPE = mass × g × height; e.g. 50 cm = 0.5 m GPE = 1 × 10 × 0.5 (= 5 J)	 allow 0.5 seen anywhere allow use of g = 9.8(1) (m/s^2)	2
(d) (i)	efficiency formula seen; substitution; evaluation; e.g. efficiency = useful energy output / total energy input efficiency = 5 / 12.7 (×100%) efficiency = 39.4 (%)	 ignore s.f. allow 39, 39.37… reject unsupported incorrect answer	3
(ii)	suitable linear scale chosen (>50% of grid used); axes labelled with quantities and unit; all plotting correct to nearest half square;	ignore orientation ignore plotting at 10V	3
(iii)	acceptable curve of best fit drawn up to a voltage of 6V; straight horizontal line of best fit drawn from 6V onwards;	i.e. curved line with even distribution of points either side by eye	2
(iv)	correctly read voltage from graph consistent with candidate's curve of best fit;	allow range 5.4V – 6.6V allow ecf from (iii)	1

Total for Question 8 = 14 marks