Question number	Answer	Notes	Marks
11 (a) (i)	gravitational potential energy = mass x gravitational field strength x height;	ALLOW standard symbols (m x g x h) DO NOT ALLOW 'gravity' for g	1
(ii)	substitution into correct equation;		1
	calculation; e.g. g.p.e. = 2000 x 10 x 128 2.56 (MJ)	answer given to at least 3 sf Allow J if correct (2560 000)	1
(b) (i)	2.56 (MJ);	Value from (a) (ii) / 2.6 MJ	1
(ii)	They are <u>equal</u> / k.e. = work done;		1
(iii)	work done = force x distance;	ALLOW standard symbols	1
(iv)	Substitution into correctly rearranged equation;	Allow ecf for value of energy stated in (a) (ii) or (b) (i)	1
	Calculation; e.g. d = W / F = 2 560 000 / 32 000 80 (m)		1