

Question number	Answer	Notes	Marks
8 (a)	faster; expands; decreases; convection;	must be in this order	4
(b) (i)	gravitational (potential) energy = mass x g x height;	allow in standard symbols or in words e.g. $GPE = m \times g \times h$ reject ' gravity ' for g	1
(ii)	substitution; evaluation; e.g. (GPE =) $50 \times 10 \times 80$ (GPE =) 40 000 (joules)	allow use of $g=9.8 / 9.81$ allow 40 kJ, 39 200, 39 240 (J)	2
(iii)	same answer as (b)(ii);	allow 40 000 (J)	1

Total for question 8 = 8 marks