

1. A hydrogen bomb of 1 megaton size generates  $8.4 \times 10^{15}$  joules of kinetic energy. If all the kinetic energy generated by this bomb were used to heat a cube of water  $2.0 \times 10^3$  meters on each side, what would be the temperature increase of the water? The water is initially at  $25^\circ\text{C}$ , and the density of water is  $1.0 \times 10^3 \text{ kg/m}^3$ .

- A.  $0.25^\circ\text{C}$   
B.  $500^\circ\text{C}$   
C.  $1050^\circ\text{C}$

- D.  $2.0 \times 10^9 \text{ }^\circ\text{C}$   
E. Not close to any of the above

Ans. \_\_\_\_\_