Answer on question #52077, Physics, Field Theory

Question 1. The principle of conservation of heat energy states that that when an object is at constant temperature or is in thermal equilibrium, it is losing and gaining heat at equal rates.

the heat lost by a hot body is equal to the heat gained by the cold body in any system provided there is no heat exchange between the substances involved and their surrounding

It is defined as the process in which molecules move from area of high concentration to another area of low concentration until an equilibrium concentration is established within the system under consideration

(P+aV2)(V-b)=RT

2 Which of the following statements is always true for a reaction in which there is no non-expansion work?

 $\begin{array}{l} \Delta H = qp \\ \Delta U = qp \\ \text{All of the above} \\ \text{None of the above} \end{array}$

3 If the specific heat capacity of water initially is $4.2\cdot10^3$ per kg per K and g=10m/s2, the difference in temperature of water between the top and bottom of a 210 m high water fall is 0.05oC0.5oC1.0oC4.2oC

Solution 1. The principle of conservation of heat energy states that the heat lost by a hot body is equal to the heat gained by the cold body in any system provided

2. All of the above $3.\Delta T = \frac{mgh}{c_wm} = \frac{gh}{c} = \frac{210 \cdot 10}{4200} = 0.5^{\circ}C$

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