Answer on Question #52086, Physics, Field Theory

Heat can be defined as----------
the change in temperature of a body
the flow of temperature from one body to another
energy that flows from place to place as a result of the difference in temperature between them
the measure of hotness or coolness of a body

Answer: energy that flows from place to place as a result of the difference in temperature between them

11 Two bodies may be said to be in thermal equilibrium if
the bodies are thermally insulated from one another
the bodies are not in thermal equlibrium with another body
if one body loses heat to the other
if there not net flow of heat between the two bodies two bodies in thermal contact

Answer:if there not net flow of heat between the two bodies two bodies in thermal contact

12 Heat capacity has units as
J/kg.K
J/mol.K
J.ohm/sec.K2
W/m.K
Answer: J/kg.K

13 An engine absorbs 2000J of heat from a hot reservoir and expels 750J to a cold reservoir during each operating cycle. What is the power output of the engine if each cycle lasts for 0.5 seconds?

750W
1750W
3000W
2500W

Solution

The work performed by the engine is $A = 2000J - 750J = 1250J$.

The power output of the engine if each cycle is $P = A/t = 1250J/0.5s = 2500W$

Answer: $P = 2500W$