INDIAN SCHOOL NIZWA - WORKSHEET

PHYSICS

CH: 11 THERMAL

PROPERTIES OF MATTER

Name: _____ Date:_____ Class: XI Sec: _A__

1.	Water has the maximum density at (a) 4^0C (b) 100^0C (c) 0^0C (d) 10^0C
2.	During change of state of a matter (a) Temperature remains constant (b) Temperature changes (c) Mass changes (d) Density remains constant
3.	Which of the following phenomenon is responsible for the transfer of heat from one end of a metallic rod to the other end? (a) Radiation (b) Convection (c) Both radiation and convection (d) Conduction
	Short answer
1.	What is the temperature at which Celsius and Fahrenheit scales give the same reading?
2.	Taking absolute zero as the basis of the scales of temperature, what are the values of melting and boiling points of water?
3.	Can temperature of a body be negative on the Kelvin scale?
4.	Why is a small gap left between the iron rails of railway track?

5.	Why is invar used for making clock pendulum?
6.	What is the difference between specific heat and molar specific heat?
7.	What is the thermal conductivity of a perfect heat conductor and a perfect heat insulator?
8.	Ice at 0^0 is converted into steam at 100^0C. State the isothermal changes in the process.
9.	Why iron rims are heated red hot before being put on the cart wheels?
10.	Pendulum clocks generally run fast in winter and slow in summer . why?
11.	Name the electrical analogies of temperature and temperature gradient?
12.	Which object will cool faster when kept in open air, the one at 300^0C or the one at 100^0C. Why?
13.	One end of a 0.25m long metal bar is in steam and the other end is in contact with ice. If 12g of ice melts per minute, what is the thermal conductivity of the metal? Given the cross section of the bar = $5 \times 10^{-4}m^2$ and the latent heat of ice is 80 $calg^{-1}$.
14.	Calculate the rate of loss of heat through a glass window of area $1000cm^2$ and thickness 0.4cm when temperature inside is 37^0C and outside is -5^0C. coefficient of thermal capacity of glass is 2.2×10^{-3} cal s^{-1} $cm^{-1}K^{-1}$.
15.	Assertion: Water at 4^0C has maximum density Reason: When water at 0^0C is heated, its volume decreases and density increases until its temperature reaches 4^0C.
16.	Assertion: Time period of a pendulum increases with length. Reason: pendulum clocks run faster in winter.