XI Physics Worksheet

Time: 30 min **Chapter#11: Thermal Properties of Matter-02** **Full Marks: 20**

Instructions:

1. All questions are compulsory.

2. Please give the explanation for the answer where applicable.

Q1 - Name the thermometers which are used to measure very high temperature.

(1 Mark)

Q2 - Define specific heat of a gas at constant volume.

(1 Mark)

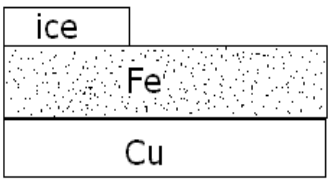
Q3 - What is a trade wind?

(1 Mark)

Q4 - How is skating possible on snow?

(2 Marks)

Q5 - A cube of ice is placed on a bimetallic strip at room temperature as shown in the fig. What will happen if the upper strip is of iron and lower strip is of copper?



(2 Marks)

Q6 - A platinum resistance thermometer has resistance 2.2 Ω at 0^0C and 5.6 Ω at 100^0C. If its resistance is 7.3 Ω in a bath, find the temperature of the bath on the platinum resistance thermometer?

(2 Marks)

Q7 - State Newton's law of cooling.

(3 Marks)

Q8 -How much should the temperature of a brass rod be increased so as to increase its length by 1%? Given α for brass is 0.00002 $^0C^{-1}$

(3 Marks)

Q9 - A pendulum clock having copper rod keeps correct time at 20^0C. It gains 15 seconds per day if cooled to 0^0C. Calculate the coefficient of linear expansion of copper.

(5 Marks)