



SNS academy

**an International CBSE Finger Print School
Coimbatore**



Name :

Date :

Grade :

Worksheet

Submission Date :

Subject : Physics

Parent's sign :

Temperature and Heat

1. Three objects X, Y and Z of masses 1 kg, 2 kg and 3 kg at temperatures 50°C , 60°C and 40°C are placed in contact with each other. The direction of heat flow is

(a) $X \rightarrow Y$, $Y \rightarrow Z$

(b) $Z \rightarrow Y$, $Y \rightarrow X$

(c) $X \rightarrow Z$, $Z \rightarrow Y$

(d) $Y \rightarrow X$, $Y \rightarrow Z$

2. Hot water is poured into four containers. Which container will cause temperature of water to drop at the slowest rate?

(a) Metal container

(b) Wooden container

(c) Metal container with lid

(d) Wooden container with lid

3. The diagram shows a brick wall between a man and a camp fire. How does thermal energy from the campfire reach the man?



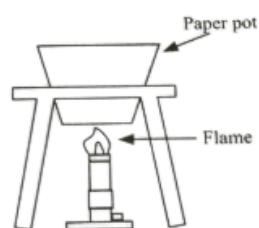
(a) Radiation \rightarrow Conduction \rightarrow Radiation

(b) Radiation \rightarrow Conduction \rightarrow Convection

(c) Radiation \rightarrow Convection \rightarrow Radiation

(d) Radiation \rightarrow Convection \rightarrow Convection

4. There is a steamboat restaurant which uses paper pots for the consumers to boil the food themselves as shown schematically. Identify the correct reasons for the paper not to catch fire when it is in contact with the flame.

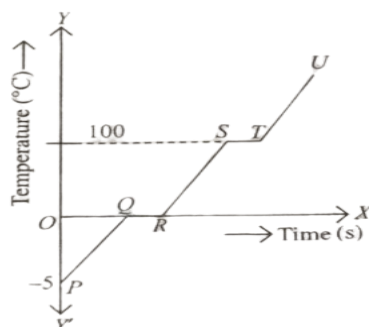


- (i) The paper is thin and therefore heat is conducted quickly to the water in the paper pot.
- (ii) Water has a boiling point lower than the burning temperature of the paper.
- (iii) The paper is thick enough to withstand the high temperature of the flame.

- (a) (i) and (ii) only
- (c) (ii) and (iii) only

- (b) (i) and (iii) only
- (d) (i), (ii) and (iii)

5. A solid substance is heated according to the heating curve as shown in the given figure.



Read the following statements and select the option that correctly identifies true(T) and false(F) ones.

- (i) The portion QR of the graph indicates no change in heat energy.
- (ii) the portion RS of the graph indicates solid state of the substance.
- (iii) Boiling point of the substances 300 degree Celsius.

- | | (i) | (ii) | (iii) |
|-----|-----|------|-------|
| (a) | T | T | T |
| (b) | T | F | T |
| (c) | F | T | F |
| (d) | F | F | F |

6. Mercury is an ideal liquid used in thermometer because

- (a) it expands a lot on heating
- (b) it does not stick to glass and is visible
- (c) it has a high boiling temperature
- (d) all the above

7. At low temperatures _____ types of thermometers is used.

- (a) water thermometer
- (b) alcohol thermometer
- (c) mercury thermometer
- (d) clinical thermometer

8. A marble tile would feel cold as compared to a wooden tile on a winter morning because the marble tile _____

- (a) is polished while the wooden tile is not polished.
- (b) it is a better conductor of heat than wooden tile.
- (c) is a poor conductor of heat than the wooden tile.
- (d) reflects more heat than wooden tile.

9. A copper ball at 50°C is dropped in a mug containing water at 50°C . The heat will _____

- (a) flow from the copper ball to water.
- (b) not flow from copper ball to water or from water to copper ball.
- (c) flow from water to copper ball.
- (d) increase the temperature of both.

10. A beggar covered himself with a few layers of newspaper on a cold winter night. This kept him warm because

- (a) friction between the layers of newspaper generates heat.
- (b) air trapped between multiple layers of newspaper is not a good conductor of heat.
- (c) newspaper is a good conductor of heat.
- (d) newspaper has a higher temperature than the surrounding temperature.

11. Stainless steel pans are commonly provided with copper bottoms. This could be because

- (a) pans made from the Copper bottom are more durable.
- (b) such pans appear colourful.
- (c) copper conducts heat better than stainless steel.
- (d) it's also easier to clean than stainless steel.