

## INDIAN SCHOOL AL WADI AL KABIR



CLASS: VII	DEPARTMENT: SCIENCE 2024 - 2025	DATE: 06/05/2024
TEXTBOOK Q & A	ТОРІС: НЕАТ	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

1. State similarities and differences between the laboratory thermometer and the clinical thermometer.

## **Ans: SIMILARITIES:**

- i) Both thermometers consist of long narrow uniform glass tubes.
- ii) Both have a bulb at one end with mercury.
- iii) Both use the Celsius scale on the glass tube.

## **DIFFERENCES:**

LABORATORY THERMOMETER	CLINICAL THERMOMETER
i) The range of a laboratory thermometer is generally from -10°C to 110°C	i) The range of a clinical thermometer is from 35°C to 42°C
ii) Kink is absent	ii) Kink is present
iii)It is used for measuring the temperature of other objects	iii)It is used only for measuring human body temperature

2. Give two examples each of conductors and insulators of heat.

Ans: Conductors of heat: i) Aluminium ii) Iron

**Insulators of heat:** i) Wood ii) Plastic

- 3. Fill in the blanks:
  - a) The hotness of an object is determined by its -----. [temperature]
  - b) Temperature of boiling water cannot be measured by a ----- thermometer. [Clinical]
  - c) Temperature is measured in degree ----- [Celsius]

- d) No medium is required for the transfer of heat by the process of ----- [Radiation]
- e) A cold steel spoon is dipped in a cup of hot milk. It transfers heat to its other end by the process of ------ [Conduction]
- f) Clothes of ----- colours absorb heat better than clothes of light colours. [Dark]

### 4. Match the following:

(i) Land breeze blows during	a) Summer
(ii) Sea breeze blows during	b) Winter
(iii) Dark-coloured clothes are preferred during	c) The day
(iv) Light-coloured clothes are preferred during	d) Night

#### Ans:

(i) Land breeze blows during	d) Night
(ii) Sea breeze blows during	c) The day
(iii) Dark-coloured clothes are preferred during	b) Winter
(iv) Light-coloured clothes are preferred during	a) Summer

5. Discuss why wearing more layers of clothing during winter keeps us warmer than wearing just one thick piece of clothing.

Ans: More layers of clothing keep us warm in winter as they have a lot of space between them. This space gets filled up with air. As air is a bad conductor, it does not allow the body heat to escape.

6. Look at the Figure. Mark where the heat is being transferred by conduction, by convection and by radiation.



Ans: a) Transfer of heat from the hot plate to the pan is by conduction.

- b) Transfer of heat within the water is by convection.
- c) Transfer of heat from hot bodies like pans, plates and burners to the surroundings is by radiation.
- 7. In places of hot climate, it is advised that the outer walls of houses be painted white. Explain.

<u>Ans:</u> In places of hot climate, it is advised to paint the outer walls of houses white because a light colour such as white reflects back most of the heat that falls on it. Hence, a light colour tends to keep the house cool.

- 8. One litre of water at  $30^{\circ}$ C is mixed with one litre of water at  $50^{\circ}$ C. The temperature of the mixture will be
  - a) 80°C

b) more than 50°C but less 80°C

c) 20°C

d) between 30°C and 50°C

Ans: d) between 30°C and 50°C.

- 9. An iron ball at 40°C is dropped in a mug containing water at 40°C. The heat will:
  - a) Flow from iron ball to water.
  - b) Not flow from iron ball to water or from water to iron ball.
  - c) Flow from water to iron ball
  - d) increase the temperature of both.

Ans: b) Not flow from iron ball to water or from water to iron ball as both the substances have the same temperature.

- 10. A wooden spoon is dipped in a cup of ice cream. Its other end
  - a) becomes cold by the process of conduction.
  - b) becomes cold by the process of convection.
  - c) becomes cold by the process of radiation.
  - d) does not become cold.

Ans: d) does not become cold as wood is a bad conductor of heat.

# 11. Stainless steel pans are usually provided with copper bottoms. The reason for this could be that:

- a) the copper bottom makes the pan more durable.
- b) such pans appear colourful.
- c) copper is a better conductor of heat than stainless steel.
- d) copper is easier to clean than stainless steel.

Ans: (c) copper is a better conductor of heat than stainless steel.

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