



INDIAN SCHOOL AL WADI AL KABIR

Class: VII	Department: SCIENCE 2020 -2021	Date of Completion: 28.05.2020
TEXTBOOK Q & A	Chapter: HEAT	Note: A4 FILE FORMAT
NAME OF THE STUDENT	CLASS & SEC:	ROLL NO.

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

Ans:

SIMILARITIES

CLINICAL THERMOMETER	LABORATORY THERMOMETER
1. In this thermometer, mercury is used	1. In this too, mercury is used
2. In this thermometer, the scale is denoted in Celsius	2. In this also, the scale is denoted in Celsius

DIFFERENCES

CLINICAL THERMOMETER	LABORATORY THERMOMETER
1. The range of a clinical thermometer is from 35°C to 42°C	1. The range of a laboratory thermometer is generally from -10°C to 110°C
2. Kink is present	2. Kink is absent
3. It is used only for measuring human body temperature	3. It is used for measuring the temperature of other objects

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

Ans: Two examples of conductors of heat are: (i) Aluminium (ii) Iron

Two examples of insulators of heat are: (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 clinical thermometer.

(c) Temperature is measured in degree celsius.

- (d) No medium is required for 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 **dark** colours absorb heat better than clothes of light colours.

**4. Match the following:**

- |  |                   |
|--|-------------------|
| (i) Land breeze blows during                     | (d) <b>night</b>  |
| (ii) Sea breeze blows during                     | (c) <b>day</b>    |
| (iii) Dark coloured clothes are preferred during | (b) <b>winter</b> |
| (iv) Light coloured clothes are preferred during | (a) <b>summer</b> |

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

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

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



- Ans: (a) Transfer of heat from burner to pan is by radiation.
- (b) Transfer of heat from pan to water is by conduction.
- (c) Transfer of heat within water is by convection.

**7. In places of hot climate, it is advised that the outer walls of houses be painted white.**

**Explain. Ans:** In places of hot climate, it is advised to paint the outer walls of houses as 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°C is mixed with one litre of water at 50°C. The temperature of the mixture will be**

- (a) 80°C
- (b) more than 50°C but less than 80°C
- (c) 20°C
- (d) between 30°C and 50°C

**Ans:** (d) The temperature of the mixture will be 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) The heat will not flow from iron ball to water or from water to iron ball as both the substances have 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) Its other end 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) copper bottom makes the pan more durable.
- (b) such pans appear colourful.
- (c) copper is a better conductor of heat than the stainless steel.
- (d) copper is easier to clean than the stainless steel.

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

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