

29/4/21

Page No. 8

Date

# CH - HEAT!

## Exercises

Q1 State similarities and differences between the laboratory thermometer and the clinical thermometer.

Ans Similarities - i) Both have mercury.  
ii) Both measure temperature.

Difference → ii) The temperature on laboratory thermometer range is  $-10^{\circ}\text{C}$  to  $110^{\circ}\text{C}$ .  
iii) Range clinical thermometer is  $35^{\circ}\text{C}$  to  $42^{\circ}\text{C}$

Q2 Give two examples each of conductors and insulators of heat?

Ans Conductors - steel, copper  
Insulators - wool, plastic

30. Fill in the blanks -

a) The heatness 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 celcius.
  - d) No medium is required for transfer of heat by the process of radiation.
  - e) A cool steel spoon is dipped in a cup of hot milk. Heat is transferred to its other end by the process of conduction.
  - f) Clothes of black colours absorb more heat better than clothes of light colours.
4. Match the following :
- i) Land breeze blows during d) night ✓
  - ii) Sea breeze blows during c) 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 If there are more than one layer of clothes, air would be trapped in between them. Air is a poor conductor of heat.  $\therefore$  increase the insulators.

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

Ans Objects with white surface reflect heat and absorb less heat.  $\therefore$  less heat from outside would enter the house.

8. One ~~litre~~ litre of water at  $30^{\circ}\text{C}$  is mixed with one litre of water at  $50^{\circ}\text{C}$ . The temperature of the mixture will be:

- a)  $80^{\circ}\text{C}$
- b) more than  $50^{\circ}\text{C}$  but less than  $80^{\circ}\text{C}$
- c)  $20^{\circ}\text{C}$
- d)  Between  $30^{\circ}\text{C}$  and  $50^{\circ}\text{C}$

9. An iron ball at  $40^{\circ}\text{C}$  is dropped in a mug containing water at  $40^{\circ}\text{C}$ . 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



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.

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.

✓  
Answer