Chapter 4

MULTIPLE CHOICE QUESTIONS

1. (a) 2. (b) 3. (c) 4. (a)

5. (a) 6. (a) 7. (c)

VERY SHORT ANSWER QUESTIONS

8. They must use some insulating material like, sack, saw dust, newspaper, etc. to cover the ice.

9. Thermometer B will show a greater rise in temperature because hot air rises up or air on the top of the candle flame is getting heated by convection.

10. Yes. Wool is poor conductor of heat.

11. Mercury expands when heated. Hence, it rises in the capillary tube.

SHORT ANSWER QUESTIONS

12. (i) The heat will flow in both the directions i.e. from O to P and O to R.

    (ii) At first the pins at R and P will fall simultaneously followed by the pin at Q.

13. In case 'B' the pin P will fall before the pin Q because the heat will reach pin P first. In case 'A', the heat travels in both the directions and pins P and Q will fall simultaneously.

14. (i) In order to maintain the desired temperature of the mixture, the container can be wrapped either by woollen material or any other poor conductor of heat. Alternately, the mixture can be kept in a heat resistant container.

    (ii) The container can be kept in the sun or near the gas stove while cooking.

15. The jerk to the thermometer will allow the mercury in or above the kink to flow into the bulb so that the mercury level is below normal temperature.

16. If we hold a thermometer by its bulb, the mercury in the bulb will expand due to our body temperature.

17. (i) On a hot summer afternoon the tent made up of white fabric will be preferred as white colour is a bad absorber and good reflector of heat.

    (ii) No, the black fabric tent will be preferred during winter.

18. The windows of houses in coastal areas should preferably face towards the sea as sea breeze will keep it cool during day time.

19. Position 'P' will feel warmer due to the hot air rising up

    P $\longrightarrow$ Convection

    T $\longrightarrow$ Radiation

20. The pin on the wire in case A will fall first as heat will reach to it before it reaches the pin in case B.