



KALPAVRUKSHA MODEL SCHOOL

Answers of Assignment-6

Class: VII

Sub: Physics

Date: 16.8.2021

Topic: TEMPERATURE AND HEAT

I. Answers:

1. Explain how heat loss by all three modes of heat transfer conduction, convection and radiation is minimized with a neat label diagram.

ANS: Heat loss due to conduction is minimized by using insulating materials such as plastic for the outer casing and the cap of the thermos flask. The inner jar is a double-walled bottle made of glass or stainless steel. The space between the two walls is a vacuum, so that heat loss due to conduction is minimized. This also reduces heat loss due to convection as there are no air molecules to carry the heat away. Heat loss due to radiation is minimized by making the surface of the jar highly reflective, so that heat radiations are reflected back into the jar. So thermos flask is a good example of how heat loss by all three modes of heat transfer conduction, convection and radiation is minimized.

2. List out the practical applications of radiation in our daily life.

ANS: Burner, in electric room heaters and solar panels While boiling water or cooking food, solar light bulb, medicine, academics and industry as well as for generating electricity, agriculture, archaeology, space exploration, geology including mining.

II. CHOOSE THE CORRECT ANSWERS:

1. A cold steel spoon is dipped in a cup of hot milk, it transfers heat to its other end by the process of _____.

a. convection
c. radiation

b. conduction
d. conductor

ANS: b. conduction

2. The hot objects which can transfer heat by radiation are _____.

a. solids only
c. liquids and gases only

b. gases only
d. liquids, gases and solids

ANS: d. liquids, gases and solids

3. In solids heat is transferred by_____.

- a. convection
- c. radiation

- b. conduction
- d. conductor

ANS: b. conduction

4. In convection currents in air transfer heat_____.

- a. downwards
- c. sideways

- b. upwards
- d. downwards as well as upwards

ANS: b. upwards

5. Which of the following conditions lead to the blowing of sea-breeze in coastal areas?

- A. land cool and sea warm
- C. day time

- B. land hot and sea cool
- D. night time

- a. A and B
- c. B and C

- b. A and C
- d. B and D

ANS: c. B and C

6. The two examples of insulators of heat are_____and_____.

- a. plastic and wood
- c. iron and metal

- b. pin and plastic
- d. iron and wood

ANS: a. plastic and wood