

Chapter 8

TRANSMISSION OF HEAT

REVIEW EXERCISES

Q.1 Match the statement of column 'A' with column 'B'.

Column A	Column B
i) Degree of hotness and coldness of any object.	a) White colour
ii) Best conductor of heat	b) Copper
iii) Wind driven currents	c) Radiation
iv) Transfer of heat in vacuum	d) Temperature
v) Poor radiator of heat	e) Ocean currents

Q.2 Fill in the blanks.

- In the evenings cool breeze from the land to sea is called a Sea breeze.
- Refrigerator works on the phenomenon of convection of heat transfer.
- An ocean current is a continuous, directed movement of Air.
- We do receive sun heat by the process of Radiation.
- Insulators do not conduct heat.

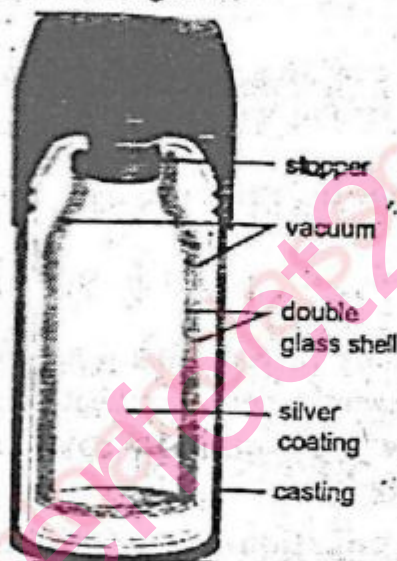
Q.3 Explain why:

- We use vacuum flask to keep hot tea remains hot.

Ans: We use vacuum flask to keep hot tea remains hot because it reduce heat transfer by any mod. The vacuum flask is a special kind of bottle in which hot liquids like tea and milk remain hot and the cold items like ice and cold water remain cold for a long time. It consists of a double walled glass

bottle. These walls are silvered from inner side. The space between the walls is evacuated with the help of a vacuum pump and sealed in order to create vacuum.

The vacuum flask is to prevent, the flow of heat to and from the bottle. Heat can flow from one place to another by three modes - conduction, convection and radiation. As a result, hot things kept in a thermo flask or vacuum flask do not become cold and cold ones do not become hot for a long time.



ii) Conduction occurs only in metals.

Ans: 1) Conduction does occur only in solids; metals are the good conductors of heat.

2) Mostly, metals are good conductors of heat. Copper is considered as the best conductor.

3) Conduction only occurs in solids and transfers heat from high temperature to lower temperature.

iii) Why Sun's heat does not reach the earth through conduction or convection?

Ans: We receive heat from sun through radiation the rate at which an object radiates or absorbs heat by

depends on its temperature and nature of its surface. The heat is carried by waves and does not involve the movement or the interaction of matter. The hotter the object, the more it radiates. The heat received on earth from the sun is the result of radiation.

iv) ***State five application of radiation in our daily life.***

Ans: Five Application of Radiation in our Daily Life

- 1) We receive heat from sun through radiation.
 - 2) We feel warm in winter while sit near the fire place.
 - 3) People of hot countries use light colours for their houses.
 - 4) Water remains hot longer in shiny kettle as it is bad radiator of heat.
 - 5) Shiny or white petrol tanks reflect heat from the sun and prevent petrol from heating up.
- v) ***State three application of conduction of heat in our daily life.***

Ans: Three Application of Condition of heat in our daily life

- 1) When we cook something using a pot or a frying pan, we are using the pan to transfer heat from the stove to the food.
- 2) When we get stick and use a mercury thermometer to measure temperature, we are using the metal tip of the thermometer to transfer our body's heat to the mercury.
- 3) To hold a frying pan we use a wooden or plastic handle to save our hands from heat being transferred by conduction.

vi) *State the working of Refrigerator.*

Ans: Refrigerator:

Refrigerator is a commonly used appliance to keep food cool to keep it for longer time. In the refrigerator, the compressor at the back, draws air through the evaporator fins to cool the food, by convection. That heat from the food is transferred into the refrigerant through the tube walls from the fins by conduction. That heat is compressed through condenser tubes and fins; transferred into the room which is carried away. There is a small amount of heat reduced by radiation. As the refrigerator needs to radiate its heat to the surroundings.



Figure Refrigerator



Figure Back fins of refrigerator

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