



# PHYSICS

## BOOKS - LAKHMIR SINGH & MANJIT

### KAUR

### HEAT

#### Exercise

1. State the unit in which temperature is commonly measured.



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2. The normal temperature of the human body is



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3. What is the normal human body temperature in Fahrenheit ?



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4. Name the liquid which is commonly used in making thermometers.



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5. What prevents the mercury level in the glass tube of a clinical thermometer from falling on its own when its bulb is removed from the mouth of a patient ?



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6. . What is the name of the thermometer which has a temperature range from,  $-10^{\circ}$  to  $110^{\circ}$  ?



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7. . What is the name of the thermometer which has a temperature range from,  $35^{\circ} C$  to  $42^{\circ} C$  ?



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**8.** A clinical thermometer has usually two temperature scales marked on its glass tube.

Name these two temperature scales.



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**9.** What is the range of a clinical thermometer on Fahrenheit scale ?



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**10.** Why we should not measure Temperature of boiling milk with clinical thermometer?



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**11.** What is the name of those thermometers which do not use mercury ?



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**12.** Name the thermometer which can automatically record the highest and lowest temperatures reached during the whole day.



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**13.** Name three ways in which heat can flow (or transferred).



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**14.** When one end of an iron rod is heated, its other end also becomes hot soon. Name the process by which heat flows in the iron rod



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**15.** Name the process by which a frying pan transfers heat from the gas stove through its bottom to the food kept inside it.



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**16.** When does the flow of heat from a hot object to a cold object stop ?



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**17.** What is the other name of poor conductors of heat ?



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**18.** Name the process by which heat is transferred within a liquid (or gas).



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**19.** State whether water is a good convector of heat or a good conductor of heat.



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20. Name the process in which heat is transferred by the movement of a liquid (or gas) itself.

A. conduction

B. convection

C. radiation

D. none of the above

**Answer: B**



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**21.** Name the process by which

water in a beaker gets heated by the burner kept below it.



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**22.** Name the process by which

air above the candle flame gets heated.



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**23.** Name the two types of breeze which blow in coastal areas.



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**24.** Which of the following method of heat transfer will work in empty space (or vacuum) ?

Convection, Radiation, Conduction



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**25.** Name a method of heat transfer which does not require a material medium.



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**26.** State the method by which heat is transferred :  
from the sun to the earth.



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**27.** State the method by which heat is transferred :

from a man's hand when placed on a cold iron vessel.



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**28.** State the method by which heat is transferred :

from the bottom of a hot liquid to its upper cooler parts.





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**29.** A person sitting in front of a room heater feels hot. Name the process by which heat is transferred.



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**30.** How does the heat from the sun reach the earth ?



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**31.** When we stand next to a burning fire, we can feel the heat on our face. Name the process which transfers this heat from fire.



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**32.** A hot utensil (filled with hot water) kept away from flame cools down by transferring heat to surroundings. Name the process of heat transfer involved.



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**33.** Which of the following is a better reflector of heat and which one is a better absorber of heat ?

(a) Shiny white surface (b) Dull black surface



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**34.** Fill in the following blanks with suitable words :

A cold steel spoon is dipped in a cup of hot

milk. It transfers heat to its other end by the process of \_\_\_\_\_



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**35.** Fill in the following blanks with suitable words :

In solids, heat is transferred by \_\_\_\_\_



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**36.** Fill in the following blanks with suitable words :

The two examples of insulators of heat are \_\_\_\_\_ and \_\_\_\_\_

A. Wood

B. Plastic

C. Metals

D. Both A and B

**Answer: D**



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**37.** Fill in the following blanks with suitable words :

Air is a \_\_\_\_\_ conductor of heat whereas copper is a \_\_\_\_\_ conductor of heat.



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**38.** Fill in the following blanks with suitable words :

Feathers and furs keep birds and animals

warm during cold weather because they have trapped \_\_\_\_\_ in them.



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**39.** Fill in the following blanks with suitable words :

The hotness of an object is determined by its

\_\_\_\_\_



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**40.** Fill in the following blanks with suitable words :

Temperature is measured in degree \_\_\_\_\_



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**41.** Fill in the following blanks with suitable words :

Temperature of boiling water cannot be measured by a \_\_\_\_\_ thermometer.



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**42.** Fill in the following blanks with suitable words :

No medium is required for the transfer of heat by the process of \_\_\_\_\_



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**43.** Fill in the following blanks with suitable words :

In liquids and gases, heat is transferred by the process of \_\_\_\_\_





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**44.** Why is a frying pan made of metal (like aluminium or stainless steel) but the handle of frying pan is made of plastic (or wood) ?



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**45.** Why are cooking utensils provided with handles made of plastic (or wood) ?



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**46.** A versatile anther is an adaptation for .....

Type of pollination.



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**47.** Why does the mercury level not fall on its own when the bulb of a clinical thermometer is removed from the mouth ?



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**48.** Define conduction. Give one example where heat is transferred by the process of conduction.



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**49.** An example of peripheral equipment is the:



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**50.** What is meant by good conductors of heat?  
Give examples of two materials which are

good conductors of heat.



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**51.** What is meant by poor conductors of heat (or insulators of heat) ? Give two examples of materials which are poor conductors of heat (or insulators).



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**52.** Classify the following materials into good conductors of heat and poor conductors of heat (or insulators) : Wood, Plastic, Copper, Air, Paper, Glass, Stainless steel, Aluminium, Thermocol, Rubber.



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**53.** Which is the second largest planet in the solar system ?



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**54.** Name the three ways in which heat is transferred. Which is the most important in :  
liquids?



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**55.** Name the three ways in which heat is transferred. Which is the most important in :  
gases?



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**56.** Name the three ways in which heat is transferred. Which is the most important in : empty space (or vacuum) ?



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**57.** Explain why, it is difficult to hold a stainless steel tumbler containing very hot tea in the hand but a thermocol cup containing the same hot tea can be held easily.



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**58.** Explain why, the clinical thermometer has a short temperature range from  $35^{\circ}\text{C}$  to  $42^{\circ}\text{C}$ ?



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**59.** What is the function of 'kink' in a clinical thermometer ?



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**60.** Define temperature ? Name the device which is used to measure temperature.



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**61.** Give the similarities and differences between the clinical thermometer and laboratory thermometer.



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**62.** Why can the sun's heat not reach the earth by conduction or convection ?



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**63.** Explain how, woollen clothes keep us warm during cold winter days. Discuss why, wearing more layers of clothing during winter keeps us warmer than wearing just one thick piece of clothing.



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**64.** What is a clinical thermometer ? What is the range of a clinical thermometer ?



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**65.** Explain how, the water in a beaker gets heated when a burner is kept below it.



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**66.** Explain how all the air in a room gets heated when a room heater kept on the floor in a corner of the room is switched on. Draw a labelled diagram to explain.



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**67.** Describe the blowing of sea-breeze and land-breeze in coastal areas .



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**68.** Why do people prefer to wear white clothes in summer ?



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**69.** Why is it better to wear dark clothes in winter ?



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**70.** What is a thermometer ? Name the thermometer used by doctors and nurses to measure the temperature of human body.



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**71.** Can we use a laboratory thermometer to measure human body temperature ? Give reason for your answer.



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**72.** Why is the box of a solar cooker painted black from inside ?



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



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**74.** What is meant by 'convection' ? Explain with the help of an example. Why is it that convection cannot take place in solids ?



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**75.** Define radiation. Give any two examples where heat is transferred by radiation. What is the name of invisible heat rays which transfer heat by radiation ?



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**76.** A person bought a book at 20% discount and sold it at 10% discount. In whole transection he got profit of 10 then find M.P. of book?

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.

**Answer: B**



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**77.** Stainless steel cooking pans are preferred with extra copper bottoms. Why ?

A. copper bottom makes the pan more durable.

B. such pans appear colourful.

C. copper is a better conductor of heat than stainless steel.

D. copper is easier to clean than stainless steel.

**Answer: C**



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**78.** 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.

**Answer: D**



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**79.** The device used to measure temperature is

A. tachometer

B. odometer

C. thermometer

D. barometer

**Answer: C**



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**80.** The expansion of one of the following liquids is used for measuring the temperature in ordinary thermometers. This liquid is

A. alcohol

B. water

C. glycerol

D. mercury

**Answer: D**



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**81.** Which of the following features are that of a clinical thermometer ?

A. Short temperature range    B. Wide temperature range

C. Alcohol filled glass bulb    D. Constriction in glass tube

A. A and B

B. B and C

C. A and D

D. B and D

**Answer: C**



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**82.** The normal temperature of a healthy person is thirty seven degrees on

- A. Kelvin scale
- B. Roemer scale
- C. Fahrenheit scale
- D. Celsius scale



**Answer: D**



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**83.** Digital thermometers available these days for measuring temperature use :

A. alcohol

B. water

C. mercury

D. none of these

**Answer: D**



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**84.** Which of the following is not a method of transfer of heat ?

A. conduction

B. radiation

C. convention

D. none of these

**Answer: C**



**View Text Solution**

**85. Which of the following is not an insulator ?**

A. brick

B. bamboo

C. brass

D. cardboard

**Answer: C**



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**86.** A liquid which is a good conductor of heat is :

A. water

B. milk

C. mercury

D. alcohol

**Answer: C**



**87.** The woollen clothes keep us warm during winter because :

- A. Wool is an insulator B. Wool is a conductor
- C. Wool traps air D. Wool has vacuum

A. A and B

B. B and C

C. C and D

D. A and C

**Answer: D**



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**88.** The objects made of steel, mica, wood and brass are lying in the same room during winter season. The objects which will feel warmer to touch are

- A. steel and brass objects
- B. mica and brass objects
- C. wooden and steel objects

D. mica and wooden objects

**Answer: D**



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**89.** The transfer of heat by convection can take place in

A. solids and liquids

B. solids and vacuum

C. gases and liquids

D. vacuum and gases

**Answer: C**



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**90.** The convection currents in air transfer heat

A. downwards

B. upwards

C. downwards as well as upwards



D. sideways

**Answer: B**



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

A. Land cool and sea warm B. Land hot and sea cool

C. Day time D. Night time

A. A and B

B. A and C

C. B and C

D. B and D

**Answer: C**



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**92.** The hot objects which can transfer heat by radiation are :

A. solids only

B. liquids and gases only

C. gases only

D. liquids, gases and solids

**Answer: D**



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**93.** The invisible rays which transfer heat by radiation are called :

A. ultraviolet rays

B. ultrasonic rays

C. infrasonic rays

D. infrared rays

**Answer: D**



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**94.** The heat from the sun reaches us on the earth by the process of :

A. conduction

B. radiation

C. convection

D. none of these

**Answer: B**



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**95.** The process which can transfer heat through the vacuum as well as air is :

A. conduction

B. convection

C. irradiation

D. radiation

**Answer: D**



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**96.** The bulb of thermometer A is coated with lampblack and the bulb of thermometer B is coated with silver. Both the thermometers are placed in sunshine for equal time

(a) Which thermometer will show a higher rise in temperature ?

(b) What conclusion is obtained from the above observation ?



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**97.** One end of the objects such as a steel spoon, a plastic scale, a pencil and a divider is put in a beaker of hot water. In which of these objects the other end will get hot ? Why ?



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**98.** Why are two thin blankets are warmer than a single blanket of double the thickness?



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**99.** A person has a white shirt and a black shirt. Which shirt will make him more comfortable in winter? Give reasons for your answer.



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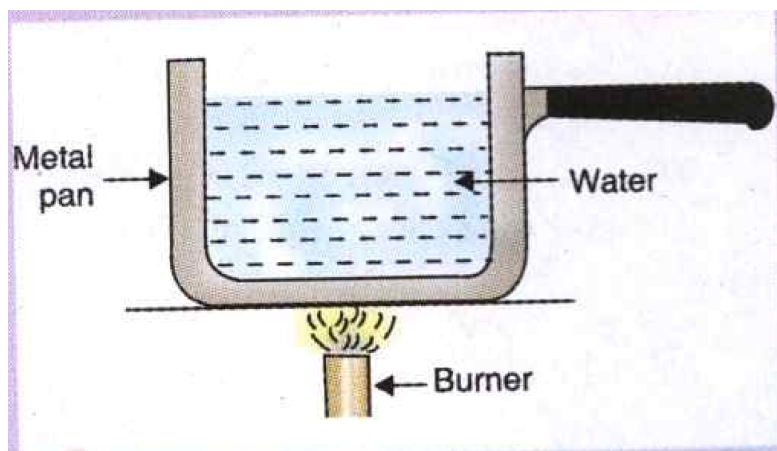
**100.** A person has a white shirt and a black shirt. Which shirt will make him more comfortable in summer? Give reasons for your answer.



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**101.** Look at the Figure given alongside. Mark where the heat is being transferred by

conduction, by convection, and by radiation.



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