PUBLIC SCHOOL DARBHANGA

SESSION (2020-21)

CLASS-7

SCIENCE

HEAT

WORKSHEET-1

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

2. Give two examples each of conductors and insulators of heat.

3.Fill in the blanks :

(a) The hotness of an object is determined by its _____.

(b) Temperature of boiling water cannot be measured by a _____ thermometer.

(c) Temperature is measured in degree _____.

(d) No medium is required for transfer of heat by the process of _____.

(e) A cold steel spoon is dipped in a cup of hot milk. Heat is transferred to its other end by the process of _____.

(f) Clothes of _____ colours absorb more heat better than clothes of light colours.

4. Match the following : (d) night

Column-I	**Column-II**
(i) Land breeze blows during	**(a) summer**
(ii) Sea breeze blows during	**(b) winter**
(iii) Dark coloured clothes are preferred during	**(c) day**
(iv) Light coloured clothes are preferred during	**(d) night**

5. Discuss why wearing more layers of clothing during winter keeps us warmer than wearing just one thick piece of clothing.

ANSWERS:

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

Solution:

Similarities

- Both are made of glass and consist of long narrow glass tube.
- At one end both of them have a bulb.
- Bulbs of both the thermometers consist of mercury
- Celsius scale is present in both the thermometer

Differences

Clinical Thermometer	**Laboratory thermometer**
Temperature range if 35 to 42 ^{0} c	Temperature range is -10 to 110 ^{0} c
Used to measure human body temperature	Used to measure temperature in the laboratory
It has kink which prevents immediate backflow of mercury	It does not have a kink

2. Give two examples each of conductors and insulators of heat.

Solution:

Conductors: Iron and Copper

Insulators: Plastic and wood

3.Fill in the blanks :

(a) The hotness of an object is determined by its _____.

(b) Temperature of boiling water cannot be measured by a _____ thermometer.

(c) Temperature is measured in degree _____.

(d) No medium is required for transfer of heat by the process of _____.

(e) A cold steel spoon is dipped in a cup of hot milk. Heat is transferred to its other end by the process of _____.

(f) Clothes of _____ colours absorb more heat better than clothes of light colours.

Solution:

(a) The hotness 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 cold 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 **dark** colours absorb more heat better than clothes of light colours.

4. Match the following : (d) night

Column-I	**Column-II**
(i) Land breeze blows during	**(a) summer**
(ii) Sea breeze blows during	**(b) winter**
(iii) Dark coloured clothes are preferred during	**(c) day**
(iv) Light coloured clothes are preferred during	**(d) night**

Solution:

Column-I	**Column-II**
(i) The land breeze blows during	(d) night
(ii) The 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.

Solution:

More layers of clothing during winter keeps us warmer than wearing just one thick piece of clothing because air gets trapped in-between layer. As air is a bad conductor of heat it does not allow the escape of the heat from the body.