

Half Yearly Examination 2017-2018

Std. : VII
Subject : PHYSICS

Full Marks : 80
Time :

SECTION-A (40 MARKS) (Compulsory to attempt all questions)

I. Define :— [2x5=10]

(a) Heat (b) eclipse (c) luminous intensity (d) Thermal expansion (e) bioluminescence

2. Fill in the Blanks :- (10)

1. Temperature is measured in degree _____.
2. The weight of a body is the force _____ acting upon it.
3. Two bodies are said to be in the state of thermal ____ if there is no transfer of heat taking place.
4. The density of ice _____ on melting.
5. The darkest portion of the shadow is called _____.
6. Pinhole camera is based on the _____ propagation of light.
7. Fastest mode of transfer of heat _____.
8. The temperature of a boiling water cannot be measured by _____.
9. A body is at high temperature, if its molecules are moving around at _____ speed.
10. The ratio of the size of an image to the size of an object is known as _____.

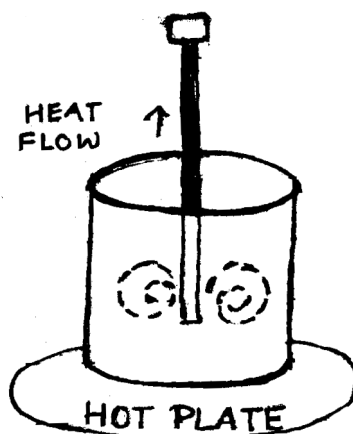
III. Give S.I. unit for [4]

(a) Heat (b) Temperature (c) luminous intensity. (d) Density.

IV. Give two examples for each : [3]

(1) Good conductor. (2) Luminous body. (3) Translucent material.

V. Mark where the heat is being transferred by conduction, by convection and by radiation.[3]



VI. Match the following and write the correct pair. [5]

- | | |
|------------------|-----------------|
| 1. Eclipse | a. Reflect heat |
| 2. Radiation | b. solar system |
| 3. Human being | c. shadow |
| 4. White surface | d. opaque |
| 5. Radiant heat | e. vacuum |

VII. Write True or False and correct the false statement. [5]

1. Water is a good conductor of heat.
2. Image formed in a pinhole camera is erect.
3. Expansion of liquids is different but of all gases is same.
4. Divergent rays of light meet at a point.
5. Air conducts heat.

SECTION-B

(Attempt any four questions)

- 1.**
 - i) State the effects of heat on a body. [3]
 - ii) Distinguish between luminous and non luminous object. [3]
 - iii) How is shadow formed ? Write the conditions required for a shadow to form. [2+2]
- 2.**
 - i) A piece of wood of mass 150 g has a volume of 200cm³. Find the density of wood in
 - a) CGS system
 - b) S. I. System. [2]
 - ii) State the characteristics of the image formed by pinhole camera. [3]
 - iii) Explain why radiators of cars are painted black. [2]
 - iv) Why mercury is used in thermometers. [3]
- 3.**
 - i) How does a clinical thermometer differ from a laboratory thermometer. [2]
 - ii) Why do we wear light coloured clothes in summer season ? [2]
 - iii) Write two difference between solar and lunar eclipse. [4]
 - iv) Convert 100°C to °F. [2]
- 4.**
 - i) Name the three temperature scales and the relationship between them. [3]
 - ii) Write two conditions must be satisfied for heat transfer by conduction. [2]
 - iii) What is the normal temperature of the humanbody in °C and °F. [2]
 - iv) State three factors on which linear expansion depend upon. [3]

5. i) What is the role of the following in a thermos flask ? [4]
- a) silvered surfaces
 - b) vacuum between the two walls.
- ii) Give reasons. [4]
- a) A thick glass tumbler is found to crack when hot tea is poured into it.
 - b) We feel warmth when touch the cheeks by rubbing the palms.
- iii) Mention two uses of non conductor of heat. [2]

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