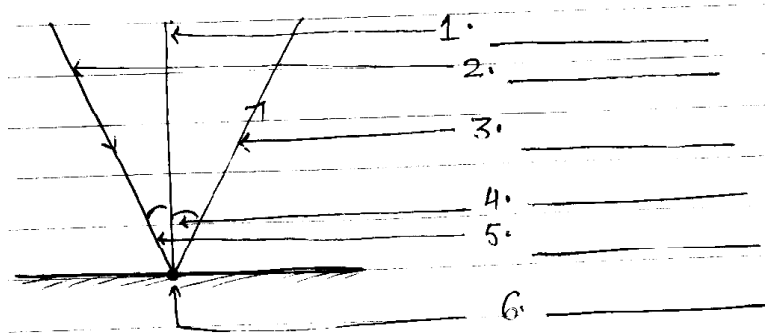


12. a. State three uses of solar energy (3)

b. Label the numbers in the given diagram and differentiate between 2 and 3 (3+2=5)



c. Calculate the volume of mass 2000 kg if it's density is 0.8 gm/cm^3 (2)

Half Yearly Examination - 2018-19

Physics

Class : VII

Time : 2 Hrs. + 15 min.

Full Marks :80

Section A

(Attempt all questions)

1. Fill in the blanks : (10x1=10)
 - a. Light is a form of energy which causes sensation of _____
 - b. The volume or space inside a container is known as _____
 - c. If the mass of a body is doubled it's potential energy will be _____
 - d. A hydrometre is used to measure _____ of a liquid.
 - e. The S.I. unit of energy is _____
 - f. The speed of light in air is _____
 - g. Green paint can be obtained by mixing _____ and _____ paint
 - h. Equal volumes of iron and aluminium have _____ masses.
 - i. Room heater converts electrical energy into _____ energy.
2. Choose the correct option : (6x1=6)
 - a. The image formed by a plane mirror is –
 - i. larger than the object
 - ii. smaller than the object
 - iii. of the same size as the object

b. When the angle of incidence is 40° , then the angle of reflection is —

- i. 30° ii. 40° iii. 50°

c. Which of the following is not a renewable source of energy –

- i. Solar energy ii. Wind energy iii. Petroleum
solar energy Wind energy

d. A device that converts light energy into electricity -

- i. electric heater ii. electric bulb iii. photocell

e. When a substance is heated, it's density –

- i. increases ii. decreases iii. remains the same

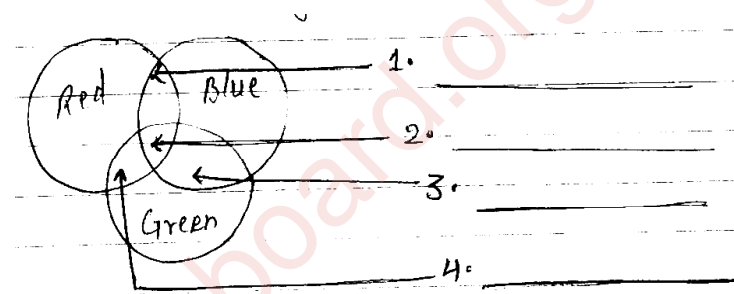
f. The perpendicular drawn at the point of incidence is known as —

- i. Normal ii. incident ray iii. angle of incidence

3. State "True" or "False" (Rewrite the incorrect statements correctly) (5x1=5)

- i. Virtual image is always inverted.
ii. The energy possessed by a body due to its position configuration or state of motion is known as chemical energy.
iii. Loud speaker converts the chemical energy into sound energy
iv. The image formed by a plane mirror is always laterally inverted.
v. When a solid is immersed in a liquid an equal volume of the liquid is displaced by the solid.

10. a. Label the numbers in given diagram : (4x1=4)



b. Mention three uses of plane mirrors. (3)

c. Choose the odd one out with proper reason (3x1=3)

- i. Diesel, Petrol, Kerosene, Wind
ii. Kilogram, Gram, Metre per second
iii. Red, Green, Blue, Magenta

11. a. An iron nail sinks but an iron ship floats on water. Why? (3)

b. Name the energy changes in the following : (4x1=4)

- i. Stereo system ii. Table fan iii. Photosynthesis
iv. Dry cell

c. Convert the following : (3x1=3)

- i. 1 hectare into m^2
ii. $1 m^3$ into cm^3
iii. 1000 litres into m^3

4. Name the followings : (8x1=8)

- a. The mass of a substance per unit volume
- b. The electricity produced by water.,
- c. Device used to see the object which are not in the direct line of sight.
- d. Mirror used as looking glass mirror of vehicles.
- e. The angle between the reflected ray and the normal.
- f. Device used to check whether a battery is fully charged or not
- g. The sources of energy which are available in limited quantity in nature.
- h. The energy obtained by splitting the nucleus of an element like uranium

5. Give reasons : (2x2=4)

- a. Letters of the word "AMBULANCE" is written laterally inverted on the front of an ambulance.
- b. Fossils fuels are non-renewable source of energy.

6. Match the following : (7x1=7)

- | A | B |
|-----------------------------------|---|
| a) S.I. unit of density | i. Magenta |
| b) Image formed by a plane mirror | ii. Converts chemical energy into sound and light |
| c) Speed | iii. Multiple images |
| d) Red + Blue | iv. Primary colour |
| e) Firecracker | v. Vector quantity |
| f) Kaleidoscope | vi. Kg / m ³ |
| g) Blue | vii. laterally inverted |
| | viii. Scalar quantity |

SECTION B

(Attempt any four questions)

7. a. Define "Energy". State the principle of law of conservation of energy (1+2=3)

b. Differentiate between the followings : (2+2=4)

- i. Regular and Irregular reflection
- ii. Angle of incidence and angle of reflection

c. Write the S.I. unit of the following : (3x1=3)

- i. Mass ii. Volume iii. Speed

8. a. Give reasons : (2+2=4)

- i. Bodies like wood and cork float on water
- ii. Light is a form of energy

b. The kinetic energy of a moving ball of mass 100g is 2000J. Find its velocity. (2)

c. Mention four characteristics of the image formed by a plane mirror (4)

9. a. Name the secondary colours obtained by mixing the following colours : (3x1=3)

- i. Red + Green = _____
- ii. Blue + Green = _____
- iii. Red + Blue + Green = _____

b. Mention three difference between real and virtual images. (3)

c. What is "Reflection of Light"? State the laws of reflection. (2+2=4)