CHAPTER-1
PHYSICAL QUANTITIES AND MEASUREMENT

Sub-Topic Name:

Measurement, Volume, Area, Density, Speed.

Very short answer Type Questions

1. Write true or false for each statement

I. 1 g cm-3 = 1000 kg m^{-3}.
II. The density of water is maximum at 4°C.
III. The speed 5 ms-1 is less than 25 km h^{-1}.
IV. The S.I. unit of speed is ms^{-1}.

2. Fill in the blanks

I. The S.I. unit of ..... is kg m^{-3}.
II. 1 g cm^{-3} = ... kg m^{-3}.
III. 36 km h^{-1} = ... ms^{-1}.
IV. Distance travelled d = ... × time t.

3.Short Answer Type Questions

1. Define the term measurement.
2. Define the term length. what is its SI unit?
3. Define the term mass. what is its SI unit?
4. How will you determine the volume of a cuboid ? Write the formula you will use.
5. Name two devices which are used to measure the volume of an object. Draw their neat diagrams.
6. Find out the relation between m^3 and cm^3 ?
7. 'The density of brass is 8.4 g cm'3'. What do you mean by the statement ?
8. Arrange the following substances in order of their increasing density: (a) iron (b) cork (c) brass (d) water (e) mercury
9. How does the density of water changes when : (a) it is heated from 0°C to 4°C, (b) it is heated from 4°C to 10°C ?

10. A car travels with a speed 12 ms^{-1}while a scooter travels with a speed 36 km h^{-1}. Which of the two travels faster?
11. Find out the relation between m/s and km/h ?
12. What is the S.I unit of volume and density? State other two smaller units of volume?
13. Convert 72 km/h to m/s.
14. A rectangular park is of length 30m and breadth 5 km . Find the area of the rectangular park.
15. By what apparatus can we measure volume. Name any two.

4.<u>Long Answer Type Questions</u>

I. Describe the method in steps to find the area of an irregular lamina using a graph paper
II. How can you determine the volume of an irregular solid (say a piece of brass) ? Describe in steps with neat diagrams
III. The mass of a lead piece is 115 g. When it is immersed into a measuring cylinder, the water level rises from 20 ml mark to 30 ml mark. Find: (i) the volume of the lead piece, (ii) the density of the lead in kg m^{-3}.
IV. How to determine the density of a liquid?