**CBSE TEST PAPER-02**

**CLASS - XI CHEMISTRY (Basic Concepts of Chemistry)**

**General Instruction:**

- All questions are compulsory.
- Marks are given alongwith their questions.

1. How are physical properties different from chemical properties?

2. What are the two different system of measurement?

3. What is the SI unit of density?

4. What are the reference points in thermometer with Celsius scale?

5. What is the SI unit of volume? What is the other common unit which in not an SI unit of volume.

6. Write seven fundamental quantities & their units.

7. What is the difference between mass & weight? How is mass measured in laboratory?

8. How is volume measured in laboratory? Convent 0.5L into ml and $30cm^3$ to $dm^3$

9. Convert $35^0C$ to $^oF$ & K.

10. What does the following prefixes stand for –

(a) pico (b) nano (c) centi (d) deci

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**CLASS - XI CHEMISTRY [ANSWERS]**

Ans 1. Physical properties are those properties which can be measured or observed without changing the identity or the composition of the substance whereas the measurement of chemical properties require a chemical change to occur e.g. colour, odour etc are physical properties and combustion, basicity etc are chemical properties.

Ans 2. The different system of measurement are English system and the metric system.

Ans 3. The SI Unit of density is Kg $m^{-3}$ or $kg/m^3$

Ans 4. The thermometers with Celsius scale are calibrated form $0^o$ to $100^o$ where there two temperatures are the freezing and boiling of water.

Ans 5. The SI unit of volume is $m^3$ whereas litre (L) is the common unit which is not an SI unit.

Ans 6.

| Physical Quantity | SI unit |
|---|---|
| 1. Length (l) | Metre (m) |
| 2. Mass (m) | Kilogram (kg) |
| 3. Time (t) | Second (s) |
| 4. Electric Current (I) | Ampere (A) |
| 5. Thermodynamic Temperature (T) | Kelvin (K) |
| 6. Amount of substance (n) | Mole (mol) |
| 7. Luminous Intensity (I $I_v$) | Candela (Cd) |

Ans 7. Mass of a substance is the amount of matter present in it while weight is the force exerted by gravity on an object the mass of a substance is determined with the help of an analytical balance in laboratory.

Ans 8. In the laboratory volume of a liquid can be measured by using graduated cylinder, burette, pipette etc.

$1\ L = 1000\ ml$

$0.5\ L = 500\ ml$

$1000 cm3 = 1 dm^3$

$30 cm^3 = \frac{1}{100\cancel{0}} \times 3\cancel{0} dm^3$

$= 0.03 dm^3$

Ans 9.

| °F | K |
|---|---|
| $^\circ F = \frac{9}{5}(^\circ C) + 32$ | $K = ^\circ C + 273.15$ |
| $^\circ F = \frac{9}{5}(35) + 32$ | $= 35 + 273.15$ |
| $= 63 + 32 = 95^\circ F$ | $= 308.15K$ |

Ans 10. Pico = $10^{-12}$

nano = $10^{-9}$

centi = $10^{-2}$

deci = $10^{-1}$