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| Chapter No. | Subject | Topic | Class | Batch |
| 1 | Chemistry | Basic Concepts of Chemistry | 11 | Nucleus |

**1 Marks**

1. What is chemistry? [1]
2. How has chemistry contributed towards nation’s development? [1]
3. Differentiate solids, liquids & gases in terms of volume & shapes. [1]
4. Name the different methods that can be used for separation of components

of a mixture. [1]

1. Classify following as pure substances and mixtures – Air, glucose, gold,

sodium and milk. [1]

1. What is the difference between molecules and compounds?

Give examples of each. [1]

1. How can we separate the components of a compound? [1]
2. How are physical properties different from chemical properties? [1]
3. What are the two different system of measurement? [1]
4. What is the SI unit of density? [1]
5. What are the reference points in thermometer with Celsius scale? [1]
6. What is the SI unit of volume? What is the other common unit which in not

an SI unit of volume. [1]

1. What is formula mass? [1]
2. State law of definite proportions. [1]
3. State Avogadro’s law. [1]
4. Define one atomic mass unit (amu). [1]
5. What is the difference between precision and accuracy? [1]
6. What do you understand by significant figures? [1]
7. What is the value of one mole? [1]
8. At NTP, what will be the volume of molecules of 6.022 x 1023H2? [1]
9. Calculate the number of molecules present in 0.5 moles of CO2? [1]
10. 1L of a gas at STP weighs 1.97g. What is molecular mass? [1]
11. What is stoichiometry? [1]
12. The substance which gets used up in any reaction is called \_\_\_\_\_\_ [1]
13. What is 1molal solution? [1]

**2 Marks**

1. How can we say that sugar is solid and water is liquid? [2]
2. How is matter classified at macroscopic level? [2]
3. Classify following substances as element, compounds and mixtures – water,

tea, silver, steel, carbondioxide and platinum [2]

1. Write seven fundamental quantities & their units. [2]
2. What is the difference between mass & weight? How is mass measured in laboratory? [2]
3. How is volume measured in laboratory? Convent 0.5L into ml and

30cm3 to dm3 [2]

1. Convert 350C to oF& K. [2]
2. What does the following prefixes stand for – [2]

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

1. Explain law of multiple proportions with an example. [2]
2. Write Postulates of Dalton’s atomic theory. [2]
3. Calculate molecular mass of – [2]

C2H6, C12H22O11, H2SO4, H3PO4

1. Give one example each of a molecule in which empirical formula

and molecular formula are (i) same (ii) Different. [2]

1. Calculate the number of moles in the following masses – [2]

(i) 7.85g of Fe

(ii) 7.9mg of Ca

1. How much potassium chlorate should be heated to produce 2.24L of

oxygen at NTP? [2]

1. Write an expression for molarity and molality of a solution. [2]
2. Calculate the weight of lime (CaO) obtained by heating 2000kg of 95% pure

lime stone (CaCO3) [2]

1. 4 litres of water are added to 2L of 6 molar HCl solutions.

What is the molarity of resulting solution? [2]

1. What volume of 10M HCl and 3M HCl should be mixed to obtain 1L of

6M HCl solution? [2]

**3 Marks**

1. How many significant figures are present in [3]

(a) 4.01 x 102

(b) 8.256

(c) 100

1. Vitamin C is essential for the prevention of scurvy.

Combustion of 0.2000g of vitamin C gives 0.2998g of CO2and 0.819g of H2O. What is the empirical formula of vitamin C? [3]

**4 Marks**

1. Write empirical formula of following --[4]

CO, Na2CO3, KCl, C6H12, H2O2, H3PO4, Fe2O3, N2O4.

**5 Marks**