

CLASS : XIth
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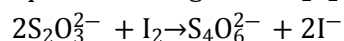
SUBJECT : CHEMISTRY
DPP No. : 9

Topic :- SOME BASIC CONCEPTS OF CHEMISTRY

- The equivalent weight of a substance is the weight which either combines or displaces:
a) 8 part oxygen b) 1 part hydrogen c) 35.5 part chlorine d) All of these
- Which of the following is correct?
a) Eq. wt. of element = $\frac{\text{at. wt.}}{\text{valence}}$
Eq. wt. of compound =
b) $\frac{\text{mol. wt.}}{\text{total charge on cation or anion}}$
c) Eq. wt. of acid = $\frac{\text{mol. wt.}}{\text{basicity}}$
d) Eq. wt. of base = $\frac{\text{mol. wt.}}{\text{acidity}}$
- Which represents per cent by volume?
a) $\frac{\text{wt. of solute}}{\text{wt. of solution}} \times 100$
b) $\frac{\text{wt. of solute}}{\text{volume of solution}} \times 100$
c) $\frac{\text{volume of solute}}{\text{volume of solution}} \times 100$
d) All of the above
- In the aqueous solution of sulphuric acid the mole fraction of water is 0.85. the molality of the solution is :
a) 8.9 m b) 0.19 m c) 9.8 m d) 15 m
- The number of atoms in 0.1 mol of a triatomic gas is:
($N_A = 6.02 \times 10^{23} \text{ mol}^{-1}$)
a) 6.026×10^{23} b) 1.806×10^{23} c) 3.600×10^{23} d) 1.80×10^{23}

6. Which contains greatest number of oxygen atoms?
a) 1 g of O
b) 1 g of O₂
c) 1 g of O₃
d) All have the same number of atoms
7. The electrochemical equivalent of a metal is 'x' g coulomb⁻¹. The equivalent weight of metal is
a) x b) $x \times 96500$ c) $\frac{x}{96500}$ d) $1.6 \times 10^{-19} \times x$
8. By Victor meyer's method, one determine the vapour density if:
a) Non-volatile solid b) All substances c) Volatile liquid d) Electrolyte
9. The percentage of oxygen in NaOH is:
a) 40 b) 16 c) 8 d) 1
10. Sulphur forms the chlorides S₂Cl₂ and SCl₂. The equivalent mass of sulphur in SCl₂ is 16. The equivalent mass of sulphur S₂Cl₂ is:
a) 8 b) 16 c) 64 d) 32
11. 1.520 g of the hydroxide of a metal on ignition gave 0.995 g of oxide. The equivalent weight of metal is
a) 1.520 b) 0.995 c) 19.00 d) 9.00
12. The product of atomic weight and specific heat of a metal is approximately 6.4. This was given by:
a) Dalton's law b) Avogadro's law c) Newton's law d) Dulong Petit's law
13. If a mixture containing 3 moles of hydrogen and 1 mole of nitrogen is converted completely into ammonia, the ratio of initial and final volumes under the same temperature and pressure would be:
a) 3 : 1 b) 1 : 3 c) 2 : 1 d) 1 : 2
14. The least count of an instrument is 0.01 cm. Taking all precautions, the most possible error in the measurement can be
a) 0.005 cm b) 0.01 cm c) 0.0001 cm d) 0.1 cm
15. A metal M forms a compound M₂HPO₄. The formula of the metal sulphate is:
a) M₂SO₄ b) MSO₄ c) M(SO₄)₂ d) M₂(SO₄)₃

16. If the molecular weight of $\text{Na}_2\text{S}_2\text{O}_3$ and I_2 are M_1 and M_2 respectively, then what will be the equivalent weight of $\text{Na}_2\text{S}_2\text{O}_3$ and I_2 in the following reaction?



- a) M_1, M_2 b) $M_1, M_2/2$ c) $2M_1, M_2$ d) $M_1, 2M_2$
17. In the final answer of the expression $\frac{(29.2 - 20.2)(1.79 \times 10^5)}{1.37}$, the number of significant figures is
- a) 1 b) 2 c) 3 d) 4
18. Haemoglobin contains 0.33% of iron by weight. The molecular weight of haemoglobin is approximately 67200. The number of iron atoms (at. Wt. of $\text{Fe} = 56$) present in one molecule of haemoglobin is
- a) 6 b) 1 c) 4 d) 2
19. In the equation,
 $\text{H}_2\text{S} + 2\text{HNO}_3 \rightarrow 2\text{H}_2\text{O} + 2\text{NO}_2 + \text{S}$
The equivalent weight of hydrogen sulphide is
- a) 18 b) 68 c) 34 d) 17
20. In a compound C, H and N are present in 9 : 1 : 3.5 by weight. If molecular weight of the compound is 108, then the molecular formula of the compound is
- a) $\text{C}_2\text{H}_6\text{N}_2$ b) $\text{C}_3\text{H}_4\text{N}$ c) $\text{C}_6\text{H}_8\text{N}_2$ d) $\text{C}_9\text{H}_{12}\text{N}_3$