

Single Correct Answer Type:

- Calculate No. of oxalic acid molecules in 100 ml, 0.02 N oxalic acid
(A) 6.023×10^{23} (B) 6.023×10^{22} (C) 6.023×10^{21} (D) 6.023×10^{20}
- Calculate the residue obtained on strongly heating 2.76 g Ag_2CO_3
(A) 216 (B) 2.16 (C) 21.6 (D) 0.216
- Haemoglobin contains 0.25% iron by mass. The molar mass of Haemoglobin is 89600. Calculate the no. of Fe atoms present per molecule of Haemoglobin
(A) 3 (B) 4 (C) 6 (D) 8
- How many grams of oxygen required to burn 570 g of octane completely?
(A) 2000 (B) 200 (C) 20,000 (D) 240
- A sample of impure silver (1.5 g) is heated with sulphur to form Ag_2S . The mass of Ag_2S formed was 0.124g. What was the percentage yield of Ag_2S ?
(A) 6.41% (B) 7.2% (C) 8.27% (D) 10.8%
- 100 ml of PH_3 on heating forms P_4 and H_2 , the volume change in the reaction is
(A) increase of 50 ml (B) increase of 100 ml
(C) increase of 150 ml (D) decrease of 50 ml
- A gaseous compound of carbon and nitrogen containing 53.8% by weight of nitrogen was found to have vapour density of 25.8, then the molecular formula is
(A) C_3N_2 (B) C_2N_3 (C) C_2N_2 (D) C_2N
- What weight of AgCl will be precipitated when a solution containing 4.77 g of NaCl is added to a solution of 5.77 g of AgNO_3 ?
(A) 3.82 g (B) 5.31 g (C) 4.13 g (D) 4.87 g
- Zn and HCl react according to the reaction $\text{Zn(s)} + 2\text{HCl}_{(\text{aq})} \longrightarrow \text{Zn(s)} + \text{H}_2(\text{g})$ of 0.3 mole zn are added to 0.52 mole HCl then how many mole of H_2 are produced?
(A) 0.3 (B) 0.26 (C) 0.52 (D) 0.15
- An organic compound on analysis gave $\text{C} = 5.45\%$, $\text{H} = 9.1\%$ by mass, its empirical formula is
(A) CHO_2 (B) CH_2O (C) $\text{C}_2\text{H}_4\text{O}$ (D) $\text{C}_3\text{H}_4\text{O}$
- The empirical formula of a compound is CH , its molecular weight of 78. The molecular formula will be
(A) C_2H_2 (B) C_3H_3 (C) C_4H_4 (D) C_6H_6
- The chloride of a metal has formula MCl_3 , the formula of its phosphate will be
(A) M_2PO_4 (B) MPO_4 (C) M_3PO_4 (D) $\text{M}(\text{PO}_4)_2$
- For the formation of 3.65 g of HCl gas, what volumes of hydrogen and chlorine gases are required at NTP.
(A) 1.12 L, 1.12 L (B) 11.2 L, 11.2 L
(C) 22.4 L, 22.4 L (D) 2.24 L, 2.24 L
- One mole of acidified $\text{K}_2\text{Cr}_2\text{O}_7$ on reaction with excess of KI will liberate x moles of I_2 , then x is?
(A) 6 (B) 1 (C) 7 (D) 3

15. The value of 'n' in the reaction

$$\text{Cr}_2\text{O}_7^{-2} + 14\text{H}^+ + n\text{Fe}^{+2} \longrightarrow 2\text{Cr}^{+3} + n\text{Fe}^{+3} + 7\text{H}_2\text{O}$$
 (A) 2 (B) 3 (C) 6 (D) 7
16. The volume in litre of CO_2 liberated at STP when 10 g of 90% pure limestone is heated completely is
 (A) 22.4 L (B) 2.24 L (C) 20.16 L (D) 2.016 L
17. In which of the following pairs is there the greatest difference in the oxidation numbers of the underlined elements?
 (A) $\underline{\text{N}}\text{O}_2$ and $\underline{\text{N}}_2\text{O}_4$ (B) $\underline{\text{S}}\text{O}_3^{-2}$ and $\underline{\text{S}}\text{O}_4^{-2}$ (C) $\underline{\text{N}}\text{O}_2$ and $\underline{\text{N}}_2\text{O}_4$ (D) $\underline{\text{S}}^{-2}$ and $\underline{\text{S}}\text{O}_4^{-2}$
18. Calculate the molarity of NaOH in solution prepared by dissolving 4g in enough water to make 250 ml of solution
 (A) 4 M (B) 0.4 M (C) 0.04 M (D) 40 M
19. Calculate the normality of a solution of oxalic acid $[(\text{COOH})_2 \cdot 2\text{H}_2\text{O}]$ containing 12.6 g of acid in 500 ml of solution?
 (A) 4 N (B) 0.4 N (C) 0.04 N (D) 40 N
20. A solution containing 2.5 moles of ethanol and 7.5 moles of H_2O . Calculate the mole fraction of H_2O ?
 (A) 0.25 (B) 0.75 (C) 2.5 (D) 0.5

Numerical Based:

21. The weight of 1×10^{22} molecules of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ is
22. Given that the abundance of isotopes ^{54}Fe , ^{56}Fe , ^{57}Fe is 5%, 90% and 5% respectively the atomic mass of Fe is
23. The molarity of a solution obtained by mixing 750 ml of 0.5 M HCl with 250 ml of 2 M HCl will be
24. Dissolving 120 g of urea in 1000 g of water gave a solution of density 1.15 g/ml. The molarity of solution is
25. Among the following, what is the no. of elements showing only one non zero oxidation state?
 O, Cl, F, N, P, Sn, Tl, Na, Pb

KEY

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| 1. D | 2. B | 3. B | 4. A | 5. B |
| 6. C | 7. C | 8. D | 9. B | 10. C |
| 11. D | 12. B | 13. A | 14. D | 15. C |
| 16. D | 17. D | 18. B | 19. B | 20. B |
| 21. 4.14 | 22. 55.95 | 23. 0.875 | 24. 2.05 | 25. 2 |

** Wish You all the Best **