

# CHEMISTRY STUDY MATERIALS FOR CLASS 9

## (MCQ TYPE QUESTIONS – ANSWERS)

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### ATOMS AND MOLECULES

15. Which of the following represents the correct relation between Avogadro's number ( $N_0$ ), number of particles (N) and moles (n)?
- (a)  $n = N / N_0$       (b)  $n = N_0 / N$       (c)  $n = N N_0$       (d) all are correct
16. The atomicity of  $K_2Cr_2O_7$  is
- (a) 9      (b) 11      (c) 10      (d) 12
17. The formula for quicklime is
- (a)  $CaCl_2$       (b)  $CaCO_3$       (c)  $Ca(OH)_2$       (d) **CaO**
18. The symbol of cadmium is
- (a) Ca      (b) Cu      (c) Cm      (d) **Cd**
19. All noble gas molecules are
- (a) **Monoatomic**      (b) Diatomic      (c) Triatomic      (d) Both I and II
20. The valency of nitrogen in  $NH_3$  is
- (a) 1      (b) **3**      (c) 4      (d) 5
21. The formula of ethanol is  $C_2H_5OH$ . What will be its molecular mass?
- (a) 46 u      (b) 34 u      (c) 34 g      (d) **46 g**
22. Number of moles present in 28g of nitrogen atoms are
- (a) 1 mole      (b) 2.3 moles      (c) 0.5 mole      (d) **2 moles**
23. The molecular mass of x is 106. x can be
- (a)  $CaCO_3$       (b)  $SO_3$       (c)  **$Na_2CO_3$**       (d) NaCl

24. Which among the following is not a postulate of Dalton's atomic theory?
- (a) Atoms cannot be created or destroyed
- (b) Atoms of different elements have different sizes, masses and chemical properties
- (c) Atoms of same elements can combine in only one ratio to produce more than any one compound**
- (d) Atoms are very tiny particles which cannot be further divided
25. Which of the following is a wrong Combination?
- (a)  $6.022 \times 10^{23}$  molecules of oxygen = 32g of oxygen
- (b)  $6.022 \times 10^{23}$  ions of sodium = 23g of sodium
- (c)  $6.022 \times 10^{23}$  atoms of C = 24g of carbon**
- (d)  $6.022 \times 10^{23}$  atoms of H = 1g of hydrogen atoms
26. Which of the following has largest number of particles?
- (a) 8g of  $\text{CH}_4$  (b) 4.4g of  $\text{CO}_2$
- (c) 34.2g of  $\text{C}_{12}\text{H}_{22}\text{O}_{11}$  **(d) 2g of  $\text{H}_2$**
27. The number of molecules in 16.0g of oxygen is:
- (a)  $6.02 \times 10^{23}$  (b)  $6.02 \times 10^{-23}$  (c)  $3.01 \times 10^{-23}$  **(d)  $3.01 \times 10^{23}$**
28. The percentage of hydrogen in  $\text{H}_2\text{O}$  is:
- (a) 8.88 **(b) 11.12** (c) 20.60 (d) 80.0
29. Find the mass of oxygen contained in 1 kg of potassium nitrate  $\text{KNO}_3$ .
- (a) 475.5g (b) 485.5g **(c) 475.2g** (d) 485.2g
30. How many moles of electron weight one kilogram?
- (a)  $6.023 \times 10^{23}$  (b)  $6.023 \times 10^8$  (c)  $9.108 \times 10^{54}$  **(d)  $1.82 \times 10^6$**
31. 25.4g of iodine and 14.2g of chlorine are made to react completely to yield a mixture of  $\text{ICl}$  and  $\text{ICl}_3$ . Calculate the ratio of moles of  $\text{ICl}$  and  $\text{ICl}_3$ :
- (a) 1: 1** (b) 2: 1 (c) 3: 1 (d) 1: 2

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