

- In CuO (copper oxide), the valency of copper is:  
(A) 1 (B) 2 (C) 0.5 (D) 3
- The formula  $(\text{NH}_4)_2\text{SO}_4$  can be named as:  
(A) Ammonium carbonate (B) Ammonium sulphite  
(C) Ammonium sulphate (D) Ammonium chromate
- The symbol Sb stands for stibium or stibnite. What is the modern name of this element?  
(A) Arsenic (B) Tin (C) Antimony (D) Seaborgium
- Noble gases are inert because they have completed outer electron shells. Which of these elements isn't a noble gas?  
(A) Helium (B) Argon (C) Chlorine (D) Krypton
- What is the most common isotope of hydrogen?  
(A) Protium (B) Deuterium (C) Tritium (D) None of the given
- Which of the given elements is a non-metal?  
(A) Sulphur (B) Manganese (C) Aluminium (D) Beryllium
- The symbol Ag stands for which element?  
(A) Gallium (B) Magnesium (C) Gold (D) Silver
- What do you call an atom that has more protons than electrons?  
(A) Isotope (B) Isobar (C) Molecule (D) Cation
- Choose the correct option of the following equation after balancing it.  

$$\text{LiHCO}_{3(s)} \rightarrow \text{Li}_2\text{CO}_{3(s)} + \text{H}_2\text{O}_{(g)} + \text{CO}_{2(g)}$$
 (A)  $2\text{LiHCO}_{3(s)} \rightarrow \text{Li}_2\text{CO}_{3(s)} + \text{H}_2\text{O}_{(g)} + \text{CO}_{2(g)}$   
 (B)  $2\text{LiHCO}_{3(s)} \rightarrow \text{Li}_2\text{CO}_{3(s)} + \text{H}_2\text{O}_{(g)} + 2\text{CO}_{2(g)}$   
 (C)  $2\text{LiHCO}_{3(s)} \rightarrow \text{Li}_2\text{CO}_{3(s)} + 2\text{H}_2\text{O}_{(g)} + 2\text{CO}_{2(g)}$   
 (D)  $4\text{LiHCO}_{3(s)} \rightarrow 2\text{Li}_2\text{CO}_{3(s)} + \text{H}_2\text{O}_{(g)} + 4\text{CO}_{2(g)}$
- The formula of mercuric oxide is:  
(A) HgO (B) Hg<sub>2</sub>O (C) HgO<sub>2</sub> (D) Hg<sub>2</sub>O<sub>2</sub>
- When iron reacts with sulphuric acid, ferric sulphate and hydrogen are formed. Choose the balanced equation for the reaction.  
(A)  $3\text{Fe} + 2\text{H}_2\text{SO}_4 \rightarrow \text{Fe}_2(\text{SO}_4)_3 + 3\text{H}_2$  (B)  $2\text{Fe} + 3\text{H}_2\text{SO}_4 \rightarrow \text{Fe}_2(\text{SO}_4)_3 + 3\text{H}_2$   
(C)  $3\text{Fe} + 3\text{H}_2\text{SO}_4 \rightarrow 3\text{Fe}_2(\text{SO}_4)_3 + 2\text{H}_2$  (D)  $2\text{Fe} + 3\text{H}_2\text{SO}_4 \rightarrow \text{Fe}_2(\text{SO}_4)_3 + 2\text{H}_2$
- Caustic soda reacts with chlorine gas to form sodium chloride, sodium chlorate and water according to the equation:  $6\text{NaOH} + x\text{Cl}_2 \rightarrow 5\text{NaCl} + \text{NaClO}_3 + 3\text{H}_2\text{O}$ . How many chlorine molecules are required in this reaction?  
(A) 3 (B) 4 (C) 2 (D) 6

13. An element X forms an oxide  $XO_3$ . What is the valency of X?  
 (A) 1 (B) 2 (C) 3 (D) 6
14. In isotopes the number of neutrons is-  
 (A) Same (B) Different (C) Both (D) None
15. The atoms of the elements having same mass number but different atomic number are called-  
 (A) Isotopes (B) Isobars (C) Isotones (D) Isomers
16. Diamond is a-  
 (A) An element (B) A compound (C) A mixture (D) An isotope of sulphur
17. The isotopes of chlorine with mass number 35 and 37 exist in 3:1 ratio respectively. What is the average mass of chlorine?  
 (A) 36 (B) 36.5 (C) 35.75 (D) 35.5
18. Which one of the following is a compound?  
 (A) Mercury (B) Ozone (C) Air (D) Ammonia
19. An alloy is a/ an:  
 (A) Compound (B) Allotropic form (C) Mixture (D) Isomer
20. The best standard of atomic mass is  
 (A) Carbon – 12 (B) Oxygen – 16 (C) Hydrogen – 1.008 (D) Chlorine – 35.5
21. Which of the proportion of the element is a whole number?  
 (A) Atomic mass (B) Atomic number (C) Atomic radius (D) Atomic volume
22. Sodium reacts with oxygen to form sodium oxide. What is the correct formula of sodium oxide?  
 (A) NaO (B)  $NaO_2$  (C)  $Na_2O$  (D)  $Na_2O_3$
23. Iron reacts with oxygen in presence of moisture to form rust. The formula of rust is-  
 (A)  $Fe_2O_3$  (B)  $Fe_3O_4 \cdot xH_2O$  (C) FeO (D)  $Fe_3O_4$
24. Zinc is an amphoteric metal, it reacts with acids as well as bases. When zinc reacts with an sodium hydroxide alkali it forms sodium zincate and hydrogen. Give a balanced equation for this reaction.  
 (A)  $Zn + NaOH \rightarrow NaZnO_2 + H_2$  (B)  $2Zn + 2NaOH \rightarrow Na_2Zn_2O_2 + H_2$   
 (C)  $Zn + 2NaOH \rightarrow Na_2ZnO_2 + 2H_2$  (D)  $Zn + 2NaOH \rightarrow Na_2ZnO_2 + H_2$
25. In the molecule  $Al_2(SO_4)_3$  what could be the value of 'X' in  $SO_4^{-X}$ ?  
 (A) 1 (B) 2 (C) 3 (D) 4