



**CHAPTER : 1**

1. What is meant by skeletal equation?
2. What do you observe when magnesium ribbon is burnt?
3. What is the difference between the following two types of reaction?  
$$\text{AgNO}_3 + \text{HCl} \rightarrow \text{AgCl} + \text{HNO}_3$$
$$\text{Mg} + 2 \text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$$
4. Define rancidity.
5. Name one synthetic antioxidant.
6. Why is hydrogen peroxide kept in coloured bottles?
7. Photosynthesis is considered an endothermic reaction. Justify.
8. What is wrong with the following equation?  
$$\text{Mg} + \text{O} \rightarrow \text{MgO}$$
9. Give one example of a combination reaction which is also exothermic.
10. Name the oxidizing and reducing agent in the following reaction  
$$2\text{H}_2\text{S} + \text{SO}_2 \rightarrow 2\text{H}_2\text{O} + 3\text{S} \quad \downarrow$$
11. What changes in the colour of iron nails and copper sulphate solution do you observe after keeping the iron nails dipped in copper sulphate solution for about 30 minutes?
12. Name and state the law which is kept in mind while we balance a chemical equation.
13. Balance the following equation  
$$\text{FeSO}_4 \xrightarrow{\Delta} \text{Fe}_2\text{O}_3 + \text{SO}_2 + \text{SO}_3$$
14. Why do we store silver chloride in dark coloured bottles?
15. What happens when milk is left open at room temperature during summers?
16. Identify the reducing agent in the following reaction :  
$$\text{Fe}_2\text{O}_3 + 3 \text{CO} \rightarrow 2\text{Fe} + 3 \text{CO}_2$$
17. Why do chips manufacturers usually flush bags of chips with gas such as Nitrogen?
18. Why do copper vessels lose shine when exposed to air?
19. Decomposition reactions are called the opposite of combination reactions. Why?
20. What happens to silver articles when exposed to air?
21. Identify the substance that is oxidized, reduced in the following reaction.  
$$\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$$

## CHAPTER - 2

22. Two solutions A and B have pH values of 5 and 8 respectively. Which solution will be basic in nature?
23. Arrange the following in the increasing order of acidic strength. Acetic acid, water and hydrochloric acid.
24. If a few drops of a concentrated acid accidentally spills over the hand of a student, what should be done?
25. Why aqueous ammonia solution is considered a base although ammonia does not contain hydroxyl ( $\text{OH}^-$ ) ion?
26. What are the products formed when an acid reacts with a base?
27. Which one of these has a higher concentration of  $\text{H}^+$  ions?  
1 M HCl or 1 M  $\text{CH}_3\text{COOH}$
28. In addition to sodium hydrogen carbonate, baking powder contains a substance 'X'. Name the substance 'X'.
29. Name the substance obtained by the action of chlorine on dry slaked lime.
30. What is the commercial name of calcium sulphate hemihydrate?
31. Fresh milk has a pH of 6. When it changes into curd, will its pH value increase or decrease. Why?
32. Why is the electrolysis of a concentrated solution of sodium chloride known as chlor-alkali.
33. POP is stored in moisture proof container. Why?
34. Name the acid present in ant sting.
35. What happens when egg shell is added to Nitric acid?
36. What is the pH of gastric juices released during digestion?
37. Tooth decay starts when pH of mouth is lower than 5.5. Why?
38. Name a salt which does not contain water of crystallization.
39. Name the sodium compound which is used for softening hard water.
40. What is the common name of the compound  $\text{CaOCl}_2$
41. Which gas is liberated when an acid reacts with a metal?

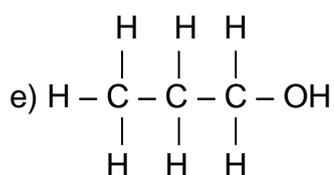
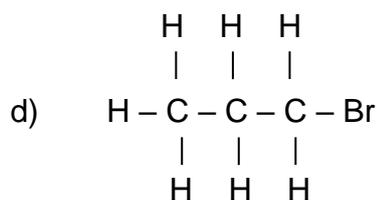
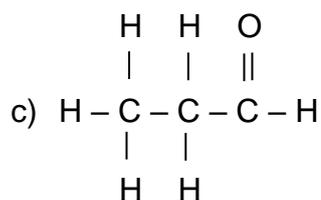
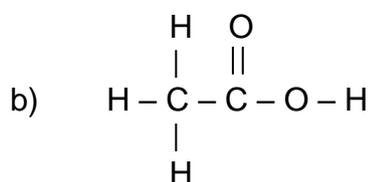
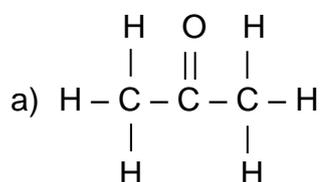
## CHAPTER - 3

42. Why are metals good conductors of electricity?
43. Name two metals which melt at body temperature.
44. Name the metals which do not react with water at all.
45. What is the nature of metal oxides and Non – Metal oxides?
46. Why does Calcium float in water?
47. What is flux?
48. Why are ionic compounds usually hard?
49. Aluminum does not react with water under ordinary conditions. Why?
50. What is rust?
51. What is Corrosion?
52. What is aquaregia?
53. What is galvanisation?
54. Give an example of a sulphide ore which is reduced to metal by heating alone, i.e. by roasting?
55. Why does a little addition of Carbon in iron make it more useful?
56. Name two metals that are soft and can be cut with a knife.

57. Name the metal which reacts with a very dilute  $\text{HNO}_3$  to evolve hydrogen gas.
58. What is meant by metallurgy?
59. Differentiate between the oxides of magnesium and sulphur.
60. Arrange copper, silver and aluminum in increasing order of reactivity.
61. What are amphoteric oxides?

#### CHAPTER - 4

62. Name the simplest hydrocarbon and give its formula.
63. Name a cycloalkane with molecular formula  $\text{C}_6\text{H}_{12}$
64. Write the general formula of alkanes, alkenes, alkynes.
65. Give the IUPAC name and molecular formula of next homologue of
  - a) Hexyne
  - b) Butanoic acid
  - c) Pentanal
  - d) Chloromethane
  - e) Methylalcohol
66. Name the functional group present in the following compounds.



67. Pure ethanoic acid is also called glacial acetic acid. Why?
68. Name the type of reaction shown by the following
  - a) Saturated hydrocarbon
  - b) Unsaturated hydrocarbon
69. State the versatile nature of carbon.
70. Draw the structure for ethanoic acid.
71. Define homologous series.
72. How does Carbon attain noble gas configuration?
73. Which element exhibits the property of catenation to maximum extent? Why?
74. Write the name and molecular formula of the fourth member of alkane series.
75. Write the name and structure of an alcohol with three carbon atoms in its molecule.

76. Write the number of covalent bonds in the molecules of Butane.
77. Name the process of converting vegetable oil to vegetable ghee.
78. Name the functional group present in  $\text{CH}_3\text{COCH}_3$  and state the name of this compound.
79. Write the molecular formula of
  - a) Hexane
  - b) Benzene
80. What is the common name of  $\text{CH}_3\text{COOH}$ ?
81. Draw the electron dot structure of nitrogen molecule.

## **CHAPTER - 5**

82. Define valency.
83. Which is the shortest and longest period in the modern periodic table?
84. List a group of elements that follows Dobereiner's triads.
85. Indicate the number of groups and periods in Mendeleev's and Modern periodic table.
86. State the Modern periodic law.
87. List two anomalous pairs in Mendeleev's periodic table.
88. Name three elements for which Mendeleev left gap in his periodic table.
89. List the position of metals and non metals in the periodic table.
90. Name four elements which are chemically inert.
91. What is the Horizontal rows and vertical columns called as?
92. Name two elements which will be chemically similar to aluminium. What is the basis of your choice.
93. Why is the position of hydrogen not justified in the Modern periodic table?
94. A metal 'M' belongs to the 13<sup>th</sup> group in the Modern periodic table. Write its valency.
95. Write two reasons responsible for late discovery of noble gases.
96. Li, Na, K form a Dobereiner triad. The atomic masses of Li and K are 7 and 39 respectively. Predict the atomic mass of sodium.
97. Which important property did Mendeleev used to classify the elements in the periodic table.
98. State one reason for placing, Mg and Ca in the same group of the periodic table.
99. There are 7 electrons in the outer most 'L' shell of an element. Predict the period and group in the periodic table this element belongs to.
100. List any two properties of the elements belonging to the first group of the Modern periodic table.
101. Mention the limitations of the Law of Octaves.

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