

Inorganic Chemistry: Basic to Advanced

1. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

2. Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is:

- A) NH_3
- B) H_2O
- C) Cl^-
- D) CN^-

■ **Correct Answer: A**

■ **Explanation:** Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is: Correct option is A.

3. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

4. Which molecule has hydrogen bonding?

- A) CH_4
- B) NH_3
- C) CO_2
- D) BF_3

■ **Correct Answer: B**

■ **Explanation:** Which molecule has hydrogen bonding? Correct option is B.

5. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

6. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer: A**

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

7. Alkali metals are stored in:

- A) Water
- B) Air

- C) Kerosene
- D) Ethanol

■ **Correct Answer: C**

■ **Explanation:** Alkali metals are stored in: Correct option is C.

8. Which halogen is most reactive?

- A) F₂
- B) Cl₂
- C) Br₂
- D) I₂

■ **Correct Answer: A**

■ **Explanation:** Which halogen is most reactive? Correct option is A.

9. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

10. Which element has the highest electronegativity?

- A) F
- B) O
- C) Cl
- D) N

■ **Correct Answer: A**

■ **Explanation:** Which element has the highest electronegativity? Correct option is A.

11. Ligand in [Co(NH₃)₆]³⁺ is:

- A) NH₃
- B) H₂O
- C) Cl⁻
- D) CN⁻

■ **Correct Answer: A**

■ **Explanation:** Ligand in [Co(NH₃)₆]³⁺ is: Correct option is A.

12. Which is a transition metal?

- A) Zn
- B) Sc
- C) Mg
- D) Al

■ **Correct Answer: B**

■ **Explanation:** Which is a transition metal? Correct option is B.

13. Alkali metals are stored in:

- A) Water
- B) Air
- C) Kerosene
- D) Ethanol

■ **Correct Answer: C**

■ **Explanation:** Alkali metals are stored in: Correct option is C.

14. CaCO₃ decomposes on heating to give:

- A) $\text{CaO} + \text{CO}_2$
- B) $\text{Ca} + \text{CO}_2$
- C) $\text{CaO} + \text{C}$
- D) $\text{Ca} + \text{O}_2$

■ **Correct Answer: A**

■ **Explanation:** CaCO_3 decomposes on heating to give: Correct option is A.

15. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

16. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

17. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

18. Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is:

- A) NH_3
- B) H_2O
- C) Cl^-
- D) CN^-

■ **Correct Answer: A**

■ **Explanation:** Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is: Correct option is A.

19. The bond order in O_2 is:

- A) 1
- B) 2
- C) 3
- D) 1.5

■ **Correct Answer: D**

■ **Explanation:** The bond order in O_2 is: Correct option is D.

20. The hybridization of carbon in CO_2 is:

- A) sp
- B) sp^2
- C) sp^3
- D) sp^3d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO_2 is: Correct option is A.

21. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

22. Sulfur forms which oxide acidic in nature?

- A) SO₂
- B) SO₃
- C) S₂O₃
- D) SO

■ **Correct Answer: B**

■ **Explanation:** Sulfur forms which oxide acidic in nature? Correct option is B.

23. Ionization energy decreases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Ionization energy decreases: Correct option is B.

24. Which complex is diamagnetic?

- A) [Fe(CN)₆]⁴⁻
- B) [Fe(H₂O)₆]³⁺
- C) [Cu(NH₃)₄]²⁺
- D) [Ni(CO)₄]

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

25. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

26. Fe₂O₃ is:

- A) Ferric oxide
- B) Ferrous oxide
- C) Both
- D) None

■ **Correct Answer: A**

■ **Explanation:** Fe₂O₃ is: Correct option is A.

27. Which element has the highest electronegativity?

- A) F
- B) O
- C) Cl
- D) N

■ **Correct Answer: A**

■ **Explanation:** Which element has the highest electronegativity? Correct option is A.

28. Atomic radius increases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Atomic radius increases: Correct option is B.

29. Atomic radius increases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Atomic radius increases: Correct option is B.

30. The bond order in O₂ is:

- A) 1
- B) 2
- C) 3
- D) 1.5

■ **Correct Answer: D**

■ **Explanation:** The bond order in O₂ is: Correct option is D.

31. The coordination number of [Fe(CN)₆]³⁻ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of [Fe(CN)₆]³⁻ is: Correct option is B.

32. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

33. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer: A**

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

34. Ligand in [Co(NH₃)₆]³⁺ is:

- A) NH₃
- B) H₂O
- C) Cl⁻
- D) CN⁻

■ **Correct Answer: A**

■ **Explanation:** Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is: Correct option is A.

35. Atomic radius increases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Atomic radius increases: Correct option is B.

36. The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is: Correct option is B.

37. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer: A**

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

38. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

39. The hybridization of carbon in CO_2 is:

- A) sp
- B) sp^2
- C) sp^3
- D) sp^3d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO_2 is: Correct option is A.

40. The bond order in O_2 is:

- A) 1
- B) 2
- C) 3
- D) 1.5

■ **Correct Answer: D**

■ **Explanation:** The bond order in O_2 is: Correct option is D.

41. The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is: Correct option is B.

42. Nitrogen exists as:

- A) N_2
- B) N_4
- C) N_3
- D) N

■ **Correct Answer: A**

■ **Explanation:** Nitrogen exists as: Correct option is A.

43. Which element has the highest electronegativity?

- A) F
- B) O
- C) Cl
- D) N

■ **Correct Answer: A**

■ **Explanation:** Which element has the highest electronegativity? Correct option is A.

44. CaCO_3 decomposes on heating to give:

- A) $\text{CaO} + \text{CO}_2$
- B) $\text{Ca} + \text{CO}_2$
- C) $\text{CaO} + \text{C}$
- D) $\text{Ca} + \text{O}_2$

■ **Correct Answer: A**

■ **Explanation:** CaCO_3 decomposes on heating to give: Correct option is A.

45. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer: A**

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

46. Sulfur forms which oxide acidic in nature?

- A) SO_2
- B) SO_3
- C) S_2O_3
- D) SO

■ **Correct Answer: B**

■ **Explanation:** Sulfur forms which oxide acidic in nature? Correct option is B.

47. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer: A**

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

48. The hybridization of carbon in CO₂ is:

- A) sp
- B) sp²
- C) sp³
- D) sp³d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO₂ is: Correct option is A.

49. Nitrogen exists as:

- A) N₂
- B) N₄
- C) N₃
- D) N

■ **Correct Answer: A**

■ **Explanation:** Nitrogen exists as: Correct option is A.

50. Fe₂O₃ is:

- A) Ferric oxide
- B) Ferrous oxide
- C) Both
- D) None

■ **Correct Answer: A**

■ **Explanation:** Fe₂O₃ is: Correct option is A.

51. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

52. CaCO₃ decomposes on heating to give:

- A) CaO + CO₂
- B) Ca + CO₂
- C) CaO + C
- D) Ca + O₂

■ **Correct Answer: A**

■ **Explanation:** CaCO₃ decomposes on heating to give: Correct option is A.

53. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

54. The bond order in O₂ is:

- A) 1
- B) 2
- C) 3
- D) 1.5

■ **Correct Answer: D**

■ **Explanation:** The bond order in O₂ is: Correct option is D.

55. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

56. Which complex is diamagnetic?

- A) [Fe(CN)₆]⁴⁻
- B) [Fe(H₂O)₆]³⁺
- C) [Cu(NH₃)₄]²⁺
- D) [Ni(CO)₄]

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

57. Which molecule has hydrogen bonding?

- A) CH₄
- B) NH₃
- C) CO₂
- D) BF₃

■ **Correct Answer: B**

■ **Explanation:** Which molecule has hydrogen bonding? Correct option is B.

58. H₂O₂ decomposes to give:

- A) H₂ + O₂
- B) H₂O + O₂
- C) H₂ + H₂O
- D) H₂O only

■ **Correct Answer: B**

■ **Explanation:** H₂O₂ decomposes to give: Correct option is B.

59. Color of Cu²⁺ ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu²⁺ ions in aqueous solution: Correct option is A.

60. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

61. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

62. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

63. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

64. Ionization energy decreases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Ionization energy decreases: Correct option is B.

65. Alkali metals are stored in:

- A) Water
- B) Air
- C) Kerosene
- D) Ethanol

■ **Correct Answer: C**

■ **Explanation:** Alkali metals are stored in: Correct option is C.

66. The hybridization of carbon in CO₂ is:

- A) sp
- B) sp²
- C) sp³
- D) sp³d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO₂ is: Correct option is A.

67. Atomic radius increases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Atomic radius increases: Correct option is B.

68. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

69. Alkali metals are stored in:

- A) Water
- B) Air
- C) Kerosene
- D) Ethanol

■ **Correct Answer: C**

■ **Explanation:** Alkali metals are stored in: Correct option is C.

70. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer: A**

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

71. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

72. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

73. CaCO_3 decomposes on heating to give:

- A) $\text{CaO} + \text{CO}_2$
- B) $\text{Ca} + \text{CO}_2$
- C) $\text{CaO} + \text{C}$
- D) $\text{Ca} + \text{O}_2$

■ **Correct Answer: A**

■ **Explanation:** CaCO_3 decomposes on heating to give: Correct option is A.

74. CaCO_3 decomposes on heating to give:

- A) $\text{CaO} + \text{CO}_2$
- B) $\text{Ca} + \text{CO}_2$
- C) $\text{CaO} + \text{C}$
- D) $\text{Ca} + \text{O}_2$

■ **Correct Answer: A**

■ **Explanation:** CaCO_3 decomposes on heating to give: Correct option is A.

75. Sulfur forms which oxide acidic in nature?

- A) SO_2
- B) SO_3
- C) S_2O_3
- D) SO

■ **Correct Answer: B**

■ **Explanation:** Sulfur forms which oxide acidic in nature? Correct option is B.

76. The bond order in O_2 is:

- A) 1
- B) 2
- C) 3
- D) 1.5

■ **Correct Answer: D**

■ **Explanation:** The bond order in O_2 is: Correct option is D.

77. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer: A**

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

78. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

79. Which halogen is most reactive?

- A) F_2
- B) Cl_2
- C) Br_2
- D) I_2

■ **Correct Answer: A**

■ **Explanation:** Which halogen is most reactive? Correct option is A.

80. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer: A**

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

81. Sulfur forms which oxide acidic in nature?

- A) SO₂
- B) SO₃
- C) S₂O₃
- D) SO

■ **Correct Answer: B**

■ **Explanation:** Sulfur forms which oxide acidic in nature? Correct option is B.

82. Ionization energy decreases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Ionization energy decreases: Correct option is B.

83. Fe₂O₃ is:

- A) Ferric oxide
- B) Ferrous oxide
- C) Both
- D) None

■ **Correct Answer: A**

■ **Explanation:** Fe₂O₃ is: Correct option is A.

84. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

85. Which halogen is most reactive?

- A) F₂
- B) Cl₂
- C) Br₂
- D) I₂

■ **Correct Answer: A**

■ **Explanation:** Which halogen is most reactive? Correct option is A.

86. The bond order in O₂ is:

- A) 1
- B) 2
- C) 3
- D) 1.5

■ **Correct Answer: D**

■ **Explanation:** The bond order in O₂ is: Correct option is D.

87. Which halogen is most reactive?

- A) F₂
- B) Cl₂
- C) Br₂
- D) I₂

■ **Correct Answer: A**

■ **Explanation:** Which halogen is most reactive? Correct option is A.

88. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

89. Which molecule has hydrogen bonding?

- A) CH₄
- B) NH₃
- C) CO₂
- D) BF₃

■ **Correct Answer: B**

■ **Explanation:** Which molecule has hydrogen bonding? Correct option is B.

90. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer: A**

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

91. The coordination number of [Fe(CN)₆]³⁻ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of [Fe(CN)₆]³⁻ is: Correct option is B.

92. CaCO₃ decomposes on heating to give:

- A) CaO + CO₂
- B) Ca + CO₂
- C) CaO + C
- D) Ca + O₂

■ **Correct Answer: A**

■ **Explanation:** CaCO₃ decomposes on heating to give: Correct option is A.

93. Ionization energy decreases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Ionization energy decreases: Correct option is B.

94. Fe₂O₃ is:

- A) Ferric oxide
- B) Ferrous oxide
- C) Both
- D) None

■ **Correct Answer: A**

■ **Explanation:** Fe_2O_3 is: Correct option is A.

95. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

96. Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is:

- A) NH_3
- B) H_2O
- C) Cl^-
- D) CN^-

■ **Correct Answer: A**

■ **Explanation:** Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is: Correct option is A.

97. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

98. Which is a transition metal?

- A) Zn
- B) Sc
- C) Mg
- D) Al

■ **Correct Answer: B**

■ **Explanation:** Which is a transition metal? Correct option is B.

99. Which molecule has hydrogen bonding?

- A) CH_4
- B) NH_3
- C) CO_2
- D) BF_3

■ **Correct Answer: B**

■ **Explanation:** Which molecule has hydrogen bonding? Correct option is B.

100. Which halogen is most reactive?

- A) F_2
- B) Cl_2
- C) Br_2
- D) I_2

■ **Correct Answer: A**

■ **Explanation:** Which halogen is most reactive? Correct option is A.

101. Ionization energy decreases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Ionization energy decreases: Correct option is B.

102. Which complex is diamagnetic?

- A) $[\text{Fe}(\text{CN})_6]^{4-}$
- B) $[\text{Fe}(\text{H}_2\text{O})_6]^{3+}$
- C) $[\text{Cu}(\text{NH}_3)_4]^{2+}$
- D) $[\text{Ni}(\text{CO})_4]$

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

103. The hybridization of carbon in CO_2 is:

- A) sp
- B) sp^2
- C) sp^3
- D) sp^3d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO_2 is: Correct option is A.

104. The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is: Correct option is B.

105. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

106. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

107. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

108. H_2O_2 decomposes to give:

- A) $\text{H}_2 + \text{O}_2$
- B) $\text{H}_2\text{O} + \text{O}_2$
- C) $\text{H}_2 + \text{H}_2\text{O}$
- D) H_2O only

■ **Correct Answer: B**

■ **Explanation:** H_2O_2 decomposes to give: Correct option is B.

109. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

110. H_2O_2 decomposes to give:

- A) $\text{H}_2 + \text{O}_2$
- B) $\text{H}_2\text{O} + \text{O}_2$
- C) $\text{H}_2 + \text{H}_2\text{O}$
- D) H_2O only

■ **Correct Answer: B**

■ **Explanation:** H_2O_2 decomposes to give: Correct option is B.

111. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

112. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

113. Alkali metals are stored in:

- A) Water
- B) Air
- C) Kerosene
- D) Ethanol

■ **Correct Answer: C**

■ **Explanation:** Alkali metals are stored in: Correct option is C.

114. Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is:

- A) NH_3
- B) H_2O
- C) Cl^-
- D) CN^-

■ **Correct Answer: A**

■ **Explanation:** Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is: Correct option is A.

115. Which is a transition metal?

- A) Zn
- B) Sc
- C) Mg
- D) Al

■ **Correct Answer: B**

■ **Explanation:** Which is a transition metal? Correct option is B.

116. Nitrogen exists as:

- A) N_2
- B) N_4
- C) N_3
- D) N

■ **Correct Answer: A**

■ **Explanation:** Nitrogen exists as: Correct option is A.

117. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

118. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

119. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

120. Sulfur forms which oxide acidic in nature?

- A) SO_2
- B) SO_3
- C) S_2O_3
- D) SO

■ **Correct Answer: B**

■ **Explanation:** Sulfur forms which oxide acidic in nature? Correct option is B.

121. Fe_2O_3 is:

- A) Ferric oxide
- B) Ferrous oxide
- C) Both
- D) None

■ **Correct Answer: A**

■ **Explanation:** Fe_2O_3 is: Correct option is A.

122. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

123. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

124. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

125. Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is:

- A) NH_3
- B) H_2O
- C) Cl^-
- D) CN^-

■ **Correct Answer: A**

■ **Explanation:** Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is: Correct option is A.

126. The hybridization of carbon in CO_2 is:

- A) sp
- B) sp^2
- C) sp^3
- D) sp^3d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO_2 is: Correct option is A.

127. H_2O_2 decomposes to give:

- A) $\text{H}_2 + \text{O}_2$
- B) $\text{H}_2\text{O} + \text{O}_2$
- C) $\text{H}_2 + \text{H}_2\text{O}$
- D) H_2O only

■ **Correct Answer: B**

■ **Explanation:** H_2O_2 decomposes to give: Correct option is B.

128. Most abundant isotope of hydrogen:

- A) Protium
- B) Deuterium
- C) Tritium
- D) Hydrogen-4

■ **Correct Answer:** A

■ **Explanation:** Most abundant isotope of hydrogen: Correct option is A.

129. Which element has the highest electronegativity?

- A) F
- B) O
- C) Cl
- D) N

■ **Correct Answer:** A

■ **Explanation:** Which element has the highest electronegativity? Correct option is A.

130. CaCO_3 decomposes on heating to give:

- A) $\text{CaO} + \text{CO}_2$
- B) $\text{Ca} + \text{CO}_2$
- C) $\text{CaO} + \text{C}$
- D) $\text{Ca} + \text{O}_2$

■ **Correct Answer:** A

■ **Explanation:** CaCO_3 decomposes on heating to give: Correct option is A.

131. Which halogen is most reactive?

- A) F_2
- B) Cl_2
- C) Br_2
- D) I_2

■ **Correct Answer:** A

■ **Explanation:** Which halogen is most reactive? Correct option is A.

132. Which element has the highest electronegativity?

- A) F
- B) O
- C) Cl
- D) N

■ **Correct Answer:** A

■ **Explanation:** Which element has the highest electronegativity? Correct option is A.

133. H_2O_2 decomposes to give:

- A) $\text{H}_2 + \text{O}_2$
- B) $\text{H}_2\text{O} + \text{O}_2$
- C) $\text{H}_2 + \text{H}_2\text{O}$
- D) H_2O only

■ **Correct Answer:** B

■ **Explanation:** H_2O_2 decomposes to give: Correct option is B.

134. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

135. Which molecule has hydrogen bonding?

- A) CH₄
- B) NH₃
- C) CO₂
- D) BF₃

■ **Correct Answer: B**

■ **Explanation:** Which molecule has hydrogen bonding? Correct option is B.

136. Ligand in [Co(NH₃)₆]³⁺ is:

- A) NH₃
- B) H₂O
- C) Cl⁻
- D) CN⁻

■ **Correct Answer: A**

■ **Explanation:** Ligand in [Co(NH₃)₆]³⁺ is: Correct option is A.

137. Color of Cu²⁺ ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu²⁺ ions in aqueous solution: Correct option is A.

138. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

139. Alkali metals are stored in:

- A) Water
- B) Air
- C) Kerosene
- D) Ethanol

■ **Correct Answer: C**

■ **Explanation:** Alkali metals are stored in: Correct option is C.

140. Atomic radius increases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Atomic radius increases: Correct option is B.

141. The bond order in O₂ is:

- A) 1
- B) 2
- C) 3
- D) 1.5

■ **Correct Answer: D**

■ **Explanation:** The bond order in O₂ is: Correct option is D.

142. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

143. Color of Cu²⁺ ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu²⁺ ions in aqueous solution: Correct option is A.

144. Atomic radius increases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Atomic radius increases: Correct option is B.

145. Alkali metals are stored in:

- A) Water
- B) Air
- C) Kerosene
- D) Ethanol

■ **Correct Answer: C**

■ **Explanation:** Alkali metals are stored in: Correct option is C.

146. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

147. Which is a transition metal?

- A) Zn
- B) Sc
- C) Mg
- D) Al

■ **Correct Answer: B**

■ **Explanation:** Which is a transition metal? Correct option is B.

148. Which is a transition metal?

- A) Zn
- B) Sc
- C) Mg
- D) Al

■ **Correct Answer: B**

■ **Explanation:** Which is a transition metal? Correct option is B.

149. The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is: Correct option is B.

150. The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is: Correct option is B.

151. Sulfur forms which oxide acidic in nature?

- A) SO_2
- B) SO_3
- C) S_2O_3
- D) SO

■ **Correct Answer: B**

■ **Explanation:** Sulfur forms which oxide acidic in nature? Correct option is B.

152. The hybridization of carbon in CO_2 is:

- A) sp
- B) sp^2
- C) sp^3
- D) sp^3d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO_2 is: Correct option is A.

153. H_2O_2 decomposes to give:

- A) $\text{H}_2 + \text{O}_2$
- B) $\text{H}_2\text{O} + \text{O}_2$
- C) $\text{H}_2 + \text{H}_2\text{O}$
- D) H_2O only

■ **Correct Answer: B**

■ **Explanation:** H_2O_2 decomposes to give: Correct option is B.

154. The hybridization of carbon in CO_2 is:

- A) sp
- B) sp^2
- C) sp^3
- D) sp^3d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO₂ is: Correct option is A.

155. Which complex is diamagnetic?

- A) [Fe(CN)₆]⁴⁻
- B) [Fe(H₂O)₆]³⁺
- C) [Cu(NH₃)₄]²⁺
- D) [Ni(CO)₄]

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

156. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

157. Which complex is diamagnetic?

- A) [Fe(CN)₆]⁴⁻
- B) [Fe(H₂O)₆]³⁺
- C) [Cu(NH₃)₄]²⁺
- D) [Ni(CO)₄]

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

158. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

159. Which molecule has hydrogen bonding?

- A) CH₄
- B) NH₃
- C) CO₂
- D) BF₃

■ **Correct Answer: B**

■ **Explanation:** Which molecule has hydrogen bonding? Correct option is B.

160. Which is a transition metal?

- A) Zn
- B) Sc
- C) Mg
- D) Al

■ **Correct Answer: B**

■ **Explanation:** Which is a transition metal? Correct option is B.

161. Nitrogen exists as:

- A) N₂
- B) N₄
- C) N₃
- D) N

■ **Correct Answer: A**

■ **Explanation:** Nitrogen exists as: Correct option is A.

162. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

163. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

164. Which complex is diamagnetic?

- A) [Fe(CN)₆]⁴⁻
- B) [Fe(H₂O)₆]³⁺
- C) [Cu(NH₃)₄]²⁺
- D) [Ni(CO)₄]

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

165. The coordination number of [Fe(CN)₆]³⁻ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of [Fe(CN)₆]³⁻ is: Correct option is B.

166. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

167. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

168. Ionization energy decreases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Ionization energy decreases: Correct option is B.

169. Alkali metals are stored in:

- A) Water
- B) Air
- C) Kerosene
- D) Ethanol

■ **Correct Answer: C**

■ **Explanation:** Alkali metals are stored in: Correct option is C.

170. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

171. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

172. Sulfur forms which oxide acidic in nature?

- A) SO_2
- B) SO_3
- C) S_2O_3
- D) SO

■ **Correct Answer: B**

■ **Explanation:** Sulfur forms which oxide acidic in nature? Correct option is B.

173. The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is: Correct option is B.

174. Nitrogen exists as:

- A) N_2
- B) N_4
- C) N_3
- D) N

■ **Correct Answer: A**

■ **Explanation:** Nitrogen exists as: Correct option is A.

175. Which complex is diamagnetic?

- A) $[\text{Fe}(\text{CN})_6]^{4-}$
- B) $[\text{Fe}(\text{H}_2\text{O})_6]^{3+}$
- C) $[\text{Cu}(\text{NH}_3)_4]^{2+}$
- D) $[\text{Ni}(\text{CO})_4]$

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

176. Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is:

- A) NH_3
- B) H_2O
- C) Cl^-
- D) CN^-

■ **Correct Answer: A**

■ **Explanation:** Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is: Correct option is A.

177. Alkali metals are stored in:

- A) Water
- B) Air
- C) Kerosene
- D) Ethanol

■ **Correct Answer: C**

■ **Explanation:** Alkali metals are stored in: Correct option is C.

178. Which element has the highest electronegativity?

- A) F
- B) O
- C) Cl
- D) N

■ **Correct Answer: A**

■ **Explanation:** Which element has the highest electronegativity? Correct option is A.

179. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

180. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

181. Which is a transition metal?

- A) Zn
- B) Sc
- C) Mg
- D) Al

■ **Correct Answer: B**

■ **Explanation:** Which is a transition metal? Correct option is B.

182. H₂O₂ decomposes to give:

- A) H₂ + O₂
- B) H₂O + O₂
- C) H₂ + H₂O
- D) H₂O only

■ **Correct Answer: B**

■ **Explanation:** H₂O₂ decomposes to give: Correct option is B.

183. Which halogen is most reactive?

- A) F₂
- B) Cl₂
- C) Br₂
- D) I₂

■ **Correct Answer: A**

■ **Explanation:** Which halogen is most reactive? Correct option is A.

184. CaCO₃ decomposes on heating to give:

- A) CaO + CO₂
- B) Ca + CO₂
- C) CaO + C
- D) Ca + O₂

■ **Correct Answer: A**

■ **Explanation:** CaCO₃ decomposes on heating to give: Correct option is A.

185. H₂O₂ decomposes to give:

- A) H₂ + O₂
- B) H₂O + O₂
- C) H₂ + H₂O
- D) H₂O only

■ **Correct Answer: B**

■ **Explanation:** H₂O₂ decomposes to give: Correct option is B.

186. Ionization energy decreases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Ionization energy decreases: Correct option is B.

187. H₂O₂ decomposes to give:

- A) H₂ + O₂
- B) H₂O + O₂
- C) H₂ + H₂O
- D) H₂O only

■ **Correct Answer: B**

■ **Explanation:** H_2O_2 decomposes to give: Correct option is B.

188. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

189. CaCO_3 decomposes on heating to give:

- A) $\text{CaO} + \text{CO}_2$
- B) $\text{Ca} + \text{CO}_2$
- C) $\text{CaO} + \text{C}$
- D) $\text{Ca} + \text{O}_2$

■ **Correct Answer: A**

■ **Explanation:** CaCO_3 decomposes on heating to give: Correct option is A.

190. Atomic radius increases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Atomic radius increases: Correct option is B.

191. Which is a transition metal?

- A) Zn
- B) Sc
- C) Mg
- D) Al

■ **Correct Answer: B**

■ **Explanation:** Which is a transition metal? Correct option is B.

192. The bond order in O_2 is:

- A) 1
- B) 2
- C) 3
- D) 1.5

■ **Correct Answer: D**

■ **Explanation:** The bond order in O_2 is: Correct option is D.

193. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

194. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

195. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

196. The hybridization of carbon in CO₂ is:

- A) sp
- B) sp²
- C) sp³
- D) sp³d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO₂ is: Correct option is A.

197. The coordination number of [Fe(CN)₆]³⁻ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of [Fe(CN)₆]³⁻ is: Correct option is B.

198. Which is a transition metal?

- A) Zn
- B) Sc
- C) Mg
- D) Al

■ **Correct Answer: B**

■ **Explanation:** Which is a transition metal? Correct option is B.

199. Atomic radius increases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Atomic radius increases: Correct option is B.

200. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

201. Atomic radius increases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Atomic radius increases: Correct option is B.

202. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

203. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

204. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

205. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

206. H_2O_2 decomposes to give:

- A) $\text{H}_2 + \text{O}_2$
- B) $\text{H}_2\text{O} + \text{O}_2$
- C) $\text{H}_2 + \text{H}_2\text{O}$
- D) H_2O only

■ **Correct Answer: B**

■ **Explanation:** H_2O_2 decomposes to give: Correct option is B.

207. H_2O_2 decomposes to give:

- A) $\text{H}_2 + \text{O}_2$
- B) $\text{H}_2\text{O} + \text{O}_2$
- C) $\text{H}_2 + \text{H}_2\text{O}$
- D) H_2O only

■ **Correct Answer: B**

■ **Explanation:** H_2O_2 decomposes to give: Correct option is B.

208. CaCO_3 decomposes on heating to give:

- A) $\text{CaO} + \text{CO}_2$
- B) $\text{Ca} + \text{CO}_2$
- C) $\text{CaO} + \text{C}$
- D) $\text{Ca} + \text{O}_2$

■ **Correct Answer:** A

■ **Explanation:** CaCO_3 decomposes on heating to give: Correct option is A.

209. CaCO_3 decomposes on heating to give:

- A) $\text{CaO} + \text{CO}_2$
- B) $\text{Ca} + \text{CO}_2$
- C) $\text{CaO} + \text{C}$
- D) $\text{Ca} + \text{O}_2$

■ **Correct Answer:** A

■ **Explanation:** CaCO_3 decomposes on heating to give: Correct option is A.

210. The hybridization of carbon in CO_2 is:

- A) sp
- B) sp^2
- C) sp^3
- D) sp^3d

■ **Correct Answer:** A

■ **Explanation:** The hybridization of carbon in CO_2 is: Correct option is A.

211. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer:** A

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

212. Sulfur forms which oxide acidic in nature?

- A) SO_2
- B) SO_3
- C) S_2O_3
- D) SO

■ **Correct Answer:** B

■ **Explanation:** Sulfur forms which oxide acidic in nature? Correct option is B.

213. Sulfur forms which oxide acidic in nature?

- A) SO_2
- B) SO_3
- C) S_2O_3
- D) SO

■ **Correct Answer:** B

■ **Explanation:** Sulfur forms which oxide acidic in nature? Correct option is B.

214. Which complex is diamagnetic?

- A) $[\text{Fe}(\text{CN})_6]^{4-}$
- B) $[\text{Fe}(\text{H}_2\text{O})_6]^{3+}$
- C) $[\text{Cu}(\text{NH}_3)_4]^{2+}$
- D) $[\text{Ni}(\text{CO})_4]$

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

215. Which molecule has hydrogen bonding?

- A) CH₄
- B) NH₃
- C) CO₂
- D) BF₃

■ **Correct Answer: B**

■ **Explanation:** Which molecule has hydrogen bonding? Correct option is B.

216. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

217. Which halogen is most reactive?

- A) F₂
- B) Cl₂
- C) Br₂
- D) I₂

■ **Correct Answer: A**

■ **Explanation:** Which halogen is most reactive? Correct option is A.

218. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

219. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

220. CaCO₃ decomposes on heating to give:

- A) CaO + CO₂
- B) Ca + CO₂
- C) CaO + C
- D) Ca + O₂

■ **Correct Answer: A**

■ **Explanation:** CaCO₃ decomposes on heating to give: Correct option is A.

221. Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is:

- A) NH_3
- B) H_2O
- C) Cl^-
- D) CN^-

■ **Correct Answer: A**

■ **Explanation:** Ligand in $[\text{Co}(\text{NH}_3)_6]^{3+}$ is: Correct option is A.

222. Which complex is diamagnetic?

- A) $[\text{Fe}(\text{CN})_6]^{4-}$
- B) $[\text{Fe}(\text{H}_2\text{O})_6]^{3+}$
- C) $[\text{Cu}(\text{NH}_3)_4]^{2+}$
- D) $[\text{Ni}(\text{CO})_4]$

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

223. The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of $[\text{Fe}(\text{CN})_6]^{3-}$ is: Correct option is B.

224. Nitrogen exists as:

- A) N_2
- B) N_4
- C) N_3
- D) N

■ **Correct Answer: A**

■ **Explanation:** Nitrogen exists as: Correct option is A.

225. Hydrides of alkali metals are:

- A) Ionic
- B) Covalent
- C) Metallic
- D) Both

■ **Correct Answer: A**

■ **Explanation:** Hydrides of alkali metals are: Correct option is A.

226. The bond order in O_2 is:

- A) 1
- B) 2
- C) 3
- D) 1.5

■ **Correct Answer: D**

■ **Explanation:** The bond order in O_2 is: Correct option is D.

227. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

228. The hybridization of carbon in CO₂ is:

- A) sp
- B) sp²
- C) sp³
- D) sp³d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO₂ is: Correct option is A.

229. The hybridization of carbon in CO₂ is:

- A) sp
- B) sp²
- C) sp³
- D) sp³d

■ **Correct Answer: A**

■ **Explanation:** The hybridization of carbon in CO₂ is: Correct option is A.

230. Which complex is diamagnetic?

- A) [Fe(CN)₆]⁴⁻
- B) [Fe(H₂O)₆]³⁺
- C) [Cu(NH₃)₄]²⁺
- D) [Ni(CO)₄]

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

231. Which complex is diamagnetic?

- A) [Fe(CN)₆]⁴⁻
- B) [Fe(H₂O)₆]³⁺
- C) [Cu(NH₃)₄]²⁺
- D) [Ni(CO)₄]

■ **Correct Answer: D**

■ **Explanation:** Which complex is diamagnetic? Correct option is D.

232. Nitrogen exists as:

- A) N₂
- B) N₄
- C) N₃
- D) N

■ **Correct Answer: A**

■ **Explanation:** Nitrogen exists as: Correct option is A.

233. H₂O₂ decomposes to give:

- A) H₂ + O₂
- B) H₂O + O₂
- C) H₂ + H₂O
- D) H₂O only

■ **Correct Answer: B**

■ **Explanation:** H₂O₂ decomposes to give: Correct option is B.

234. H₂O₂ decomposes to give:

- A) H₂ + O₂
- B) H₂O + O₂
- C) H₂ + H₂O
- D) H₂O only

■ **Correct Answer: B**

■ **Explanation:** H_2O_2 decomposes to give: Correct option is B.

235. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

236. Nitrogen exists as:

- A) N_2
- B) N_4
- C) N_3
- D) N

■ **Correct Answer: A**

■ **Explanation:** Nitrogen exists as: Correct option is A.

237. Color of Cu^{2+} ions in aqueous solution:

- A) Blue
- B) Green
- C) Colorless
- D) Red

■ **Correct Answer: A**

■ **Explanation:** Color of Cu^{2+} ions in aqueous solution: Correct option is A.

238. Fe_2O_3 is:

- A) Ferric oxide
- B) Ferrous oxide
- C) Both
- D) None

■ **Correct Answer: A**

■ **Explanation:** Fe_2O_3 is: Correct option is A.

239. Which molecule has hydrogen bonding?

- A) CH_4
- B) NH_3
- C) CO_2
- D) BF_3

■ **Correct Answer: B**

■ **Explanation:** Which molecule has hydrogen bonding? Correct option is B.

240. CaCO_3 decomposes on heating to give:

- A) $\text{CaO} + \text{CO}_2$
- B) $\text{Ca} + \text{CO}_2$
- C) $\text{CaO} + \text{C}$
- D) $\text{Ca} + \text{O}_2$

■ **Correct Answer: A**

■ **Explanation:** CaCO_3 decomposes on heating to give: Correct option is A.

241. Ore of iron is:

- A) Hematite
- B) Magnetite
- C) Bauxite
- D) Galena

■ **Correct Answer: A**

■ **Explanation:** Ore of iron is: Correct option is A.

242. Ionization energy decreases:

- A) Across period
- B) Down group
- C) Both
- D) None

■ **Correct Answer: B**

■ **Explanation:** Ionization energy decreases: Correct option is B.

243. Fe₂O₃ is:

- A) Ferric oxide
- B) Ferrous oxide
- C) Both
- D) None

■ **Correct Answer: A**

■ **Explanation:** Fe₂O₃ is: Correct option is A.

244. Ligand in [Co(NH₃)₆]³⁺ is:

- A) NH₃
- B) H₂O
- C) Cl⁻
- D) CN⁻

■ **Correct Answer: A**

■ **Explanation:** Ligand in [Co(NH₃)₆]³⁺ is: Correct option is A.

245. The coordination number of [Fe(CN)₆]³⁻ is:

- A) 4
- B) 6
- C) 2
- D) 8

■ **Correct Answer: B**

■ **Explanation:** The coordination number of [Fe(CN)₆]³⁻ is: Correct option is B.

246. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

247. Extraction of aluminum involves:

- A) Electrolysis
- B) Reduction with C
- C) Distillation
- D) Hydration

■ **Correct Answer: A**

■ **Explanation:** Extraction of aluminum involves: Correct option is A.

248. Which is the most reactive alkali metal?

- A) Li
- B) Na
- C) K
- D) Cs

■ **Correct Answer: D**

■ **Explanation:** Which is the most reactive alkali metal? Correct option is D.

249. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.

250. Froth flotation is used for:

- A) Sulphide ores
- B) Oxide ores
- C) Carbonates
- D) All

■ **Correct Answer: A**

■ **Explanation:** Froth flotation is used for: Correct option is A.