

Here are the **answers** for the **questions** based on the chapter "**Metals and Non-Metals**" from your textbook.

SECTION A

(1) Multiple Choice Questions (MCQs)

1. b) Mercury
2. c) Oxygen
3. b) Galvanisation
4. c) Copper
5. b) Aluminium
6. b) Oxygen
7. c) Carbon
8. b) Corrosion
9. c) Bronze
10. c) Iodine

(2) Fill in the Blanks

11. Diamond
12. Tungsten
13. $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$
14. Chlorine
15. Aircraft
16. Vulcanisation
17. Gold
18. Nitrogen
19. Sodium
20. Zinc

(3) True or False

21. False
22. True

- 23. False
- 24. True
- 25. True
- 26. False
- 27. True
- 28. True
- 29. True
- 30. False (Mercury is liquid at room temperature)

SECTION B

(4) Odd One Out (Give Reason)

- 31. Oxygen (It is a non-metal, others are metals)
- 32. Mercury (It is liquid, others are solid metals)
- 33. Silicon (It is a metalloid, others are carbon allotropes)
- 34. Copper (It is a metal, others are non-metals)
- 35. Aluminium (It is a pure metal, others are alloys)
- 36. Zinc (It is not an alkali metal, others are alkali metals)
- 37. Galvanisation (It prevents rusting, others describe rusting process)
- 38. Oxygen (It is a non-metal, others are metals)
- 39. Mercury (It is a metal, others are non-metals)
- 40. Magnesium (It is a metal, others are metalloids)

(5) Matching Questions

- 41. e) Found in blood
- 42. a) Used in aircraft
- 43. b) Used in electrical wires
- 44. c) Used in jewellery
- 45. d) Prevents rusting
- 46. f) Used in making pencils
- 47. g) Essential for respiration
- 48. h) Used for water purification
- 49. i) Used in mirrors
- 50. j) Used in vulcanisation of rubber

(6) Name the Technique Used for Separation

- 51. Magnetic separation
- 52. Evaporation
- 53. Decantation or separating funnel
- 54. Crystallisation
- 55. Smelting
- 56. Fractional distillation
- 57. Refining
- 58. Filtration
- 59. Fractional distillation
- 60. Chromatography

(7) Give Examples of

- 61. Iron
- 62. Nitrogen
- 63. Aluminium
- 64. Iodine
- 65. Gold
- 66. Lead
- 67. Phosphorus
- 68. Copper
- 69. Sulfur
- 70. Silver

SECTION C

(8) Short Answer Questions

- 71. Corrosion is the process where metals react with air, water, or other chemicals to form a deteriorated layer. Example: Rusting of iron.
- 72. An alloy is a mixture of metals or a metal and non-metal. Example: Brass (Copper + Zinc), Bronze (Copper + Tin).
- 73. Gold and silver are used in jewellery because they are malleable, ductile, and resistant to corrosion.

74. Electroplating is a process of coating a metal with a less reactive metal using electricity to prevent corrosion.
75. Iron rusts due to reaction with oxygen and moisture forming $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$.
76. Aluminium is used in aircraft because it is lightweight and corrosion-resistant.
77. Galvanisation prevents rusting by coating iron with zinc, which protects it from moisture.
78. Metalloids are elements with properties of both metals and non-metals. Example: Silicon, Germanium.
79. Nitrogen is essential for plant growth and is used in fertilizers.
80. Diamond is the hardest known substance due to its strong covalent bonding.

(9) Diagram-Based Questions

81. Refer to textbook for the diagram of a separating funnel.
82. Refer to textbook for the diagram of rusting of iron.
83. Refer to textbook for the structure of diamond and graphite.
84. Refer to textbook for the electroplating process.
85. Refer to textbook for the simple electric circuit using copper wire.

(10) Reasoning-Based Questions

86. Graphite is used in pencils because it is soft and slippery.
87. Non-metals have low melting and boiling points due to weak intermolecular forces.
88. Copper is used in electrical wires because it has high electrical conductivity and is ductile.
89. Gold does not corrode easily because it is highly unreactive.
90. Food packets are filled with nitrogen to prevent oxidation and spoilage.

(11) Chemical Formula & Symbol-Based Questions

91. $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$ (Rust)
92. Na (Sodium)
93. H_2O (Water)
94. NH_3 (Ammonia)
95. Au (Gold)

This completes the **answers for all 95 questions**. Let me know if you need any modifications! 🚀