



Answer all the questions below then check your answers.

1. Which of the following properties is typical of metals?

- a) Brittle b) Good conductors of heat and electricity
c) Non-magnetic d) Poor tensile strength

2. What characteristic property makes metals suitable for electrical wiring?

- a) Hardness b) Malleable c) Brittleness d) Conductivity

3. Which of the following metals is not magnetic?

- a) Iron b) Nickel c) Copper d) Cobalt

4. The ability of metals to be hammered into thin sheets is known as:

- a) Ductility b) Malleability c) Hardness d) Tensile strength

5. Which property allows metals to be drawn into wires?

- a) Malleability b) Conductivity c) Ductility d) Hardness

6. Why are metals generally hard and have high melting points?

- a) Presence of impurities b) Strong covalent bonds

- c) Strong metallic bonds d) Weak metallic bonds

7. Which of the following factors does not affect the strength of metallic bonds?

- a) Size of metal cations b) Charge on the metal cations

- c) Number of delocalized electrons d) Atomic mass

8. What is the primary reason metals conduct electricity well?

- a) High density b) Presence of free electrons

- c) High melting point d) Large atomic radius

9. Which metal is known for its excellent thermal conductivity?

- a) Lead b) Iron c) Copper d) Zinc

10. Which of the following is not a characteristic property of metals?

- a) Lustrous appearance
- b) Poor conductivity
- c) High density
- d) Malleability

11. Metals are strong in tension because:

- a) They are malleable
- b) They have a high density
- c) They have strong metallic bonds
- d) They are ductile

12. Which of the following statements is true about metallic bonding?

- a) It involves the sharing of electron pairs
- b) It involves the attraction between positive ions and free electrons
- c) It involves the transfer of electrons from one atom to another
- d) It involves Van der Waals forces

13. Which metal is the densest?

- a) Aluminum
- b) Iron
- c) Gold
- d) Titanium

14. Metals are malleable because:

- a) Their atoms can slide past each other without breaking bonds
- b) They have low melting points
- c) They have strong covalent bonds
- d) They have a crystalline structure

15. What happens to the strength of metallic bonds as the number of delocalized electrons increases?

- a) It decreases
- b) It increases
- c) It remains the same
- d) It first increases then decreases

16. Which of the following metals is least likely to be magnetic?

- a) Iron
- b) Nickel
- c) Cobalt
- d) Aluminum

17. The lattice structure of metals can best be described as:

- a) A regular arrangement of atoms with shared electron pairs
- b) A sea of delocalized electrons around fixed positive ions
- c) Discrete molecules held together by intermolecular forces
- d) Layers of atoms held together by Van der Waals forces

18. What factor affects the density of a metal?

- a) Size of the cations
- b) Mass of the atoms
- c) Number of protons
- d) Atomic radius

19. Which metal is known for being the most malleable?

- a) Iron
- b) Gold
- c) Silver
- d) Copper

20. The ability of metals to conduct heat is primarily due to:

- a) High density
- b) High melting point
- c) Free movement of delocalized electrons
- d) High tensile strength

Answers:

1. Answer: b) Good conductors of heat and electricity
2. Answer: d) Conductivity
3. Answer: c) Copper
4. Answer: b) Malleability
5. Answer: c) Ductility
6. Answer: c) Strong metallic bonds
7. Answer: d) Atomic mass
8. Answer: b) Presence of free electrons
9. Answer: c) Copper
10. Answer: b) Poor conductivity
11. Answer: c) They have strong metallic bonds
12. Answer: b) It involves the attraction between positive ions and free electrons
13. Answer: c) Gold
14. Answer: a) Their atoms can slide past each other without breaking bonds
15. Answer: b) It increases
16. Answer: d) Aluminium
17. Answer: b) A sea of delocalized electrons around fixed positive ions
18. Answer: b) Mass of the atoms

19. Answer: b) Gold

20. Answer: c) Free movement of delocalised electrons