

Chemistry Assignment 2

- 1. Which of the following is a state function?**
 - a) Work
 - b) Heat
 - c) Internal energy
 - d) Distance
- 2. The empirical formula of glucose is:**
 - a) CH_2O
 - b) $\text{C}_6\text{H}_{12}\text{O}_6$
 - c) CHO
 - d) $\text{C}_2\text{H}_6\text{O}$
- 3. Which of the following has the highest ionization energy?**
 - a) Sodium
 - b) Potassium
 - c) Lithium
 - d) Cesium
- 4. The shape of the ammonia (NH_3) molecule is:**
 - a) Linear
 - b) Tetrahedral
 - c) Trigonal pyramidal
 - d) Bent
- 5. The value of the gas constant 'R' in $\text{J/mol}\cdot\text{K}$ is:**
 - a) 0.0821
 - b) 1
 - c) 8.314
 - d) 6.022
- 6. Which type of bond is present in an oxygen molecule (O_2)?**
 - a) Single bond
 - b) Double bond
 - c) Triple bond
 - d) Ionic bond
- 7. The process of separation of a mixture using a separating funnel is based on:**
 - a) Difference in densities
 - b) Difference in boiling points
 - c) Difference in solubility
 - d) Difference in melting points
- 8. Which element has the electron configuration $1s^2 2s^2 2p^6 3s^2 3p^5$?**
 - a) Chlorine
 - b) Fluorine
 - c) Argon
 - d) Sulfur
- 9. Which of the following is a Lewis acid?**
 - a) NH_3

- b) H_2O
 - c) BF_3
 - d) CH_4
- 10. What is the shape of the water (H_2O) molecule?**
- a) Linear
 - b) Trigonal planar
 - c) Tetrahedral
 - d) Bent
- 11. Which of the following is a nucleophile?**
- a) H^+
 - b) Cl^-
 - c) SO_4^{2-}
 - d) BF_3
- 12. What is the IUPAC name of $\text{CH}_3\text{-CH}_2\text{-CHO}$?**
- a) Propanone
 - b) Propanal
 - c) Propanoic acid
 - d) Propanol
- 13. Which of the following is not an allotrope of carbon?**
- a) Diamond
 - b) Graphite
 - c) Fullerene
 - d) Silica
- 14. Which reagent is used for the bromination of benzene?**
- a) Br_2
 - b) $\text{Br}_2/\text{FeBr}_3$
 - c) NaBr
 - d) HBr
- 15. What is the major product formed when ethene reacts with water in the presence of an acid catalyst?**
- a) Ethanol
 - b) Ethanoic acid
 - c) Ethanal
 - d) Ethane
- 16. The metal extracted by electrolysis of alumina is:**
- a) Iron
 - b) Zinc
 - c) Aluminium
 - d) Copper
- 17. The color of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ is:**
- a) Green
 - b) Blue

- c) White
- d) Red

18. Which of the following is a strong acid?

- a) CH_3COOH
- b) H_2CO_3
- c) HNO_3
- d) HCN

19. Which polymer is formed by the polymerization of styrene?

- a) Polystyrene
- b) Polyethylene
- c) PVC
- d) Teflon

20. Which process involves heating ore in the absence of air?

- a) Roasting
- b) Calcination
- c) Smelting
- d) Refining