

Chemistry Chapter 1

Long Questions

Fundamentals of Chemistry

Q1: Calculate the number of moles and number of molecules present in 6 grams of water.

Q2: List five difference Between compound and mixture .

Q3: Define molecule . Explain four types of molecules .

Q4: Define Chemical formula . How a chemical formula is written .

Q5: Define molecular and empirical formulas with examples .

Q6: How does write a chemical formula . *

Q7: Define molecular ion . Write any four difference between a molecular and molecular ion .

Q8: Define Chemistry . Explain its any four branches in details .

Q9: Define free radical , give difference Between molecule and molecular ion .

- Q3 : Describe Rutherford's gold foil experiment with diagram.
- Q4 : Write down any four properties of cathode rays.
- Q5 : Explain five postulates of Bohr's atomic model.
- Q6 : How did the cathode rays discover?
- Q7 : Draw a labeled diagram to show the presence of protons in discharge tube and explain how were canal rays produced?
- Q8 : What is an isotope? Write its three uses.
- Q9 : How many isotopes of hydrogen are there? How they are used in power generation?
- Q10 : How neutrons were discovered? Write any two properties of neutrons.
- Q11 : What are isotopes? Describe isotopes of hydrogen, carbon and chlorine.
- Q12 : Write four results of experiments of Rutherford's Atomic model.

Chapter 4 :

Structure of Molecules

- Q1 : What is an ionic bond? Discuss formation of ionic bond between sodium and chlorine atoms.
- Q2 : Describe types of covalent bond.
- Q3 : Define ionic compounds. Write down properties of ionic compounds. three (3)
- Q4 : Define Ionic bond. Write down properties of ionic compounds.

Q5: Explain five properties of metals.

Q6: Define hydrogen bonding. Explain how these forces affect physical properties of compounds.

Q7: Define covalent compounds. Write their 4 properties.

Q8: Define Ionic bond? Explain it with example.

Q9: Explain types of covalent bond with one example each.

Q10: How is a coordinate covalent bond formed? Explain with two examples.

Q11: What is coordinate covalent bond? Explain it with examples.

Q12: Define coordinate covalent bond and Discuss formation of NH_4^+ and $(\text{NH}_3 \rightarrow \text{BF}_3)$

Chapter 5:

Physical states of Matter

Q1: Differentiate Between crystalline and amorphous solids.

Q2: Define Evaporation. Explain factors affecting evaporation.

Q3: State Boyle's law and also derive its equation.

Q4: What is meant by diffusion? Describe three factors which influence diffusion in liquids.

Q5: Write experimental verification of Boyle's law.

Q6: Explain various factors affecting the rate of evaporation.

Q7: How does boiling point of liquid depend upon the nature of liquid and intermolecular forces.

Q8: State Boyle's law. Explain it mathematically.

Q9: Define Boiling point and also explain how it is affected by different factors.

Q10: State Charles' law. Describe its mathematical expression.

Q11: Define Charles' law, prove that $\frac{V_1}{T_1} = \frac{V_2}{T_2}$

Q12: What is vapour pressure? How is it affected by intermolecular forces?

Q13: What is meant by vapour pressure? Write down its three factors.

Chapter 6 : Solutions

Q1: Define Solubility. Describe effect of temperature on solubility.

Q2: What is saturated solution and how it is prepared?

Q3: Write down four properties of suspension.

Q4: Explain solubility and solute-solvent interaction along with example.

Q5: Define Molarity and write its formula to prepare molar solution.

Q6: Narrate four characteristics of colloids.

Q7: Explain how are dilute solution prepared from concentrated solutions?

Q8: What is general principle of solubility.

Q9: Define saturated solution. How supersaturated solution is prepared?

Q10: Define saturated And unsaturated Solution.

How supersaturated solution is prepared?

Chapter 7:

Electrochemistry

Q1: What is galvanic cell? Write four differences between electrolytic and galvanic cell.

Q2: How can we prepare sodium hydroxide (NaOH) on commercial scale? Discuss its chemistry along with diagram.

Q3: Explain electroplating of silver with the help of diagram.

Q4: Define electrolysis. Write down electrolysis of water in details.

Q5: Define electroplating. Explain electroplating of chromium.

Q6: Discuss the redox reaction taking place in rusting of iron in detail.

Q7: Define electrolysis. Explain electrolytic refining of copper with help of a Diagram.

Q8: Define electroplating. Describe electroplating of silver.

Q9: Define oxidation State. Write any four rules of assigning oxidation numbers.

Q10: What is principle of electroplating? How is electroplating of Chromium carried out?

Q11: Describe five rules for assigning the oxidation state.

Q12. Describe the process of rusting of iron.

Q13. What is electroplating? Write down
procedure of electroplating.

Q14.

