

Chemistry questions for practice (class 9th)

Chapter # 01

Q1) write one contribution of at least four modern scientist.

Q2) Define Chemistry and write the names of its branches.

Q3) Define all branches of chemistry

Q4) what is scientific method. Describe its four stages.

Q6) Write four sentences on the importance of chemistry.

Chapter # 02

Q1) Define: Empirical Formula, Molar Mass, Avogadro's Number, Chemical Reaction a.m.u, Mole

Q2) state the laws and explain with the help of example:

- Law of Conservation of Mass
- Law of Constant Composition
- Law of Multiple Proportion
- Law of Reciprocal Proportion

Q3) Define the following chemical reaction with the help of one example:

- Decomposition Reaction
- Addition Reaction
- Single Displacement Reaction
- Double Displacement Reaction
- Combustion Reaction

Q4) Define Landolt experiment with labeled diagram for practical verification of law of conservation of mass.

Chapter # 03

Q1) Write four properties of cathode rays.

Q2) Name four types of radioactive rays and write one example of each.

Q3) define the following terms: Atomic number, mass number, isotopes, radioactivity

Q4) write four postulates of Dalton's Atomic Theory.

Q5) Describe Rutherford's experiment which led him to the discovery of the nuclei of an atom?

Q6) what are Isotopes. Write the symbols of protium, Deuterium and Tritium with their atomic numbers and mass numbers.

Chapter # 04

Q1) which group has zero valence, name, group no. and four examples?

Q2) How many periods and groups also state Lanthanides and Actinides?

Q3) which elements possess only one electron in their valence shell? What are they called? Name the radioactive element of this group.

Q4) define:

- Periodicity
- Electronegativity
- Atomic Radius
- Ionization Potential

Q5) what are Transition element. Write any four properties.

Q6) State the following laws: Dobereiner's Law, Newland Law of Octave, Modern Periodic Law

Q7) what are Halogens? Write their names and four properties.

Q8) Name the group of the periodic table which contains highly electronegative element, also write three common Characteristics of this group.

Q9) State Mendeleev's Periodic law and Write any three salient features of Mendeleev's periodic table.

- valent and Co-ordinate bond
- Ionic and Covalent bond

Q2) what is Ionic Bond. How an Ionic Bond is formed between Sodium and Chlorine atoms resulting in the production of NaCl. Explain.

Q3) Write any two characteristics of ionic compound.

Q4) Write down three/ four common properties of covalent Compound.

Q5) what is Chemical Bond. Define Covalent Bond. Explain polar and non-polar.

Q6) what is Co-ordinate Covalent Bond. How is Co-ordinate Covalent bond formed between NH_3 and H^+ ion? Explain.

Q8) Define the following:

- Metallic Bond
- Dispersion forces
- Dipole-dipole force

Chapter # 06

Q1) Define the following:

- Diffusion
- Sublimation
- Brownian Movement
- Boiling Point
- Evaporation
- Fusion
- Freezing Point

Q2) Write four postulates of Kinetic Molecular Theory of matter.

Q3) Explain the Kinetic Molecular Theory in different states of matter.

Q4) State Graham's Law of Diffusion of gases. Which gas from among CO_2 , CH_4 and H_2 will diffuse the fastest and why? Give the reason.

Chapter # 07

Q1) Write four differences between solution and suspension.

Q2) Define: Saturated Solution, Unsaturated Solution, Super Saturated Solution, Molarity, Molality, Solubility, Crystallization

Q3) Do practice of numericals related to molarity and mole fraction.

Q4) Define Solubility and describe effects of temperature and pressure on solubility.

Chapter # 08

Q1) With the Help of labeled diagram, explain the construction and working of a Lead Storage Battery.

Q2) State Faraday's First and Second Law of electrolysis and write two advantages of electroplating.

Q3) State and explain Faraday's First Law of electrolysis?

Q4) With the Help of labeled diagram, explain the construction and working of a Dry Cell and Daniel cell.

Q5) Define the following: Ampere, Coulomb, Equivalent mass, Electrochemical Equivalent, Faraday, Electrolysis

Chapter # 09

Q1) Define Acid, base and Salt also give one example.

Q2) Write four properties of acid.

Q3) write four uses of the following:

- Sodium Bicarbonate
- Potash Alum
- Epsom Salt

Q4) what are double Salt. Write its name and Chemical formulae of any two Double Salts.

Q5) Define Salt and describe the four groups of salt with example.

Q6) Define: PH, Basicity of acid, Acidity of base, Double Salt, Standard Solution, Neutralization

Q7) Explain and give the balance Chemical equations of ammonia Solvay process for the manufacture of Sodium Carbonate.

Q8) State the Arrhenius Theory of acid and base and explain it with the help of an example.

Q9) State the Lewis Theory of acid and base and explain it with the example of HCL and NaOH.

Q10) State the Bronsted-Lowry Concepts of acid and base and explain it with the example of HCL and H_2O .

Chapter # 10

Q1) Define the following:

- Thermo chemistry
- Enthalpy
- Heat of Neutralization

Q2) Define Exothermic and Endothermic Reaction. Give its two examples.

Q3) what is a thermochemical Reaction. Write the name of its two kinds and define them with example.

Q4) define the term enthalpy of a reaction also write how the change in enthalpy (ΔH) is calculated.

Q5) what is change in enthalpy (ΔH)? How does it help to identify the types of thermo chemical reactions?

Chapter # 11

Q1) what is the difference between soft and hard water? How is hard water softened by Clark's Method?

Q2) Write any four uses of Hydrogen.

Q3) Write down four differences between ordinary water and Heavy Water.

Q4) what is hard water? How is hard water softened by using Zeolite (Permutated) process? Explain.

Q5) Define water of Crystallization. Write names and chemical formulae of hydrated salts.

Chapter # 12

Q1) what is Silica gel. Write its uses.

Q2) Define Water Glass and write uses of it.

Q3) Write four differences between Diamond and Graphite.

Q4) What is allotropy? Write the names of any two amorphous and Crystalline forms of Carbon and two Characteristics of any one of them.

Q5) write four Uses of graphite.

Chapter # 13

Q1) Write four differences between Oxidation and Reduction.

Q2) With the Help of labeled diagram and balanced chemical equation, explain how Nitric Acid is manufacture by Ostwald's Process.

Q3) Describe four types of Normal Oxides.

Q4) what are Oxides. Write the name of its four kinds.

Q5) how is Ammonia manufacture by Haber-Bosch process. Explain with balanced chemical equation.

Q6) Define Ozone. How can be prepared from oxygen. Write its two important uses.

Q7) How is ammonia gas is prepared in the laboratory? Explain the process giving a balanced chemical equation.

Q9) define Oxides. Classify oxides on the basis of oxidation states of oxygen into three groups with one example of each.

Q10) Write four uses of H_2O_2 .

Q11) Describe four types of normal Oxides on the basis of Chemical properties with example.

Chapter # 14

Q1) Explain, giving balanced chemical equation, the contact process for the manufacture of Sulphuric acid.

Q2) what is allotropy? Write the name of crystalline form of sulphur and characteristics of each of them.

Q3) Write four uses of sulphuric acid.

Q4) what is Aqua Regia. How does it dissolve Gold? Explain.

Q5) With the Help of labeled diagram, explain how sulphur is extracted by Frasch Process.

Chapter # 15

Q1) Write four uses of Chlorine.

Q2) With the Help of labeled diagram and balanced chemical equation, describe the laboratory method for the preparation of chlorine by MnO_2 and HCl.

Q3) Write any four uses of Bleaching Powder.

Q4) Write four properties of Halogen.

Q5) Express step wise Chlorination of Methane giving four chemical equation.

Chapter # 16

Q1) Describe the process of electrolytic refining of Blister Copper. Also draw a labeled diagram.

Q2) Write four difference between metals and non-metals.

Q3) what is an alloy? Write names of two alloys of copper with their composition.

Q4) Explain the process of extraction of Iron from its Hematite Ore in the Blast Furnace with chemical equation.

Q5) Write two physical and two chemical properties of Metal and Non-metal.

Q6) Define Steel and name three methods of conversion of pig iron into steel.

Chapter # 17

Q1) A Hydrocarbon contain Six carbon atom, write its molecular formula, if it is : Alkane, Alkene and Alkyne.

Q2) Define the following: Homologous Series, Functional Group, Cracking, Aliphatic hydrocarbon, alicyclic hydrocarbon, Aromatic hydrocarbon, Isomerism

Q3) What are hydrocarbon? Define Saturated and Unsaturated hydrocarbon.

Q4) define: Alkane, Alkene, Alkyne

Chapter # 18

Q1) What is Soap? How does it remove dirt and dust from cloth.

Q2) How is Caustic Soda manufactured by castner-Kellner's Cell. Equation is required. Explain.

Q3) write two causes of food spoilage and two methods of its prevention.

Q4) what are plastics? Write the name of its types.

Q5) what is soap? Write the name of its kind.

Q6) What is meant by saponification? Write the names of kinds of soap.

Q7) Define: Paints, Varnishes, Polishes, detergents

Q8) What is chemical formula of bleaching powder? Write its laboratory preparation.

Q9) Describe with the balance equation, Solvay process for industrial preparation of Anhydrous Sodium Carbonate.