

Guru Gobind Singh Public School
Sector V/B, B.S.City

Chemistry Assignment for class X

- Why should the chemical equations be balanced? Write a balanced chemical equation with state symbols for the following reactions:
 - Solution of barium chloride and sodium sulphate in water reacts to give insoluble barium sulphate and the solution of sodium chloride.
 - Sodium hydroxide solution reacts with hydrochloric acid solution to produce sodium chloride solution and water.
- What is an oxidation reaction? Give an example of oxidation reaction. Is oxidation an exothermic or endothermic reaction?
- What happens when silver chloride is exposed to sunlight? Write a chemical equation for this reaction also give one use of such reaction.
- Why does the color of copper sulphate solution change when an iron nail is dipped in it?
 - What is the color of ferrous sulphate crystals? How does this color change after heating? What type of chemical reaction occurs in this change?
- Write the balanced chemical equation for the following and identify the type of reaction in each case :
 - Potassium bromide (aq) + Barium iodide (aq) \rightarrow Potassium iodide (aq) + Barium bromide (s)
 - Zinc carbonate (s) \rightarrow Zinc oxide (s) + Carbon dioxide (g)
 - Hydrogen (g) + Chlorine (g) \rightarrow Hydrogen chloride (g)
 - Magnesium (s) + Hydrochloric acid (aq) \rightarrow Magnesium Chloride (aq) + Hydrogen (g)
 - Sodium Sulphate (aq) + Barium Chloride (aq) \rightarrow Barium Sulphate (s) + Sodium Chloride (aq)
- What is an olfactory indicator? Give two examples?
 - A milkman adds a very small amount of baking soda to fresh milk. Why does he shift the pH of the fresh milk from 6 to slightly alkaline? Why does this milk take a long time to set as curd?
 - Name the gas evolved when dilute hydrochloric acid with sodium hydrogen carbonate?
 - What is baking powder? How does it make the cake soft and spongy?
- Write the formula and chemical name of bleaching powder.
 - Write chemical equation to represent the action of carbon dioxide gas on bleaching powder when left exposed in open.
 - State for what purpose is bleaching powder used in water treatment plant.
 - How would you distinguish between baking powder and washing soda by heating?
- Give an example of a metal which: Liquid at room temperature, Can be cut with a knife, Best conductor of heat, Poor conductor of heat.
- Metal replace hydrogen from dilute acid whereas non-metal do not. Why?
 - Define mineral, ore, and gangue
 - Why do metal not evolve hydrogen gas with nitric acid?
 - Differentiate between electrolytic reduction and reduction with carbon.
 - What is a thermit reaction? Write one use.
 - Name two amphoteric Oxides.
- Write electronic dot structure of – Ethane, Ethene, Ethanoic acid, Hydrogen sulphide .
 - What are the two properties of carbon which lead to the huge number of carbon compound?
 - What do you mean by isomer? Draw the structure of two isomers of butane.
 - Give two examples of homologous series of carbon compound.
- Explain the formation of scum when soap is treated with hard water.
 - What is advantage of detergent over soap for washing clothes? Write one disadvantage also.
 - Explain the mechanism of cleaning action of soap.
- What were the limitations of Dobereiner's triad?
 - What were the limitations of Newland's Law of Octaves?
 - How could the modern periodic table remove various anomalies of Mendeleev's periodic table?
- How many groups and periods are there in modern periodic table? How do the atomic size and metallic character of elements vary as we move-
 - Down in a group
 - from left to right in a period
- The atomic number of an element X is 20.
 - Determine the position of element X in the periodic table.
 - Write the formula of compound formed when X reacts with another element Y (atomic number 8)
 - What would be the nature of the compound formed? Justify your answer.