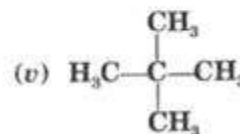
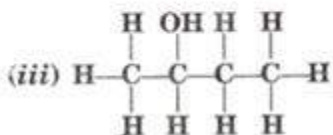
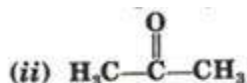
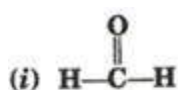


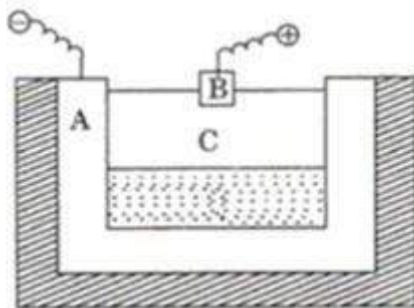
ICSE Class 10 Chemistry Important Questions

- Choose the most appropriate answer:
 - Which of the following is a common characteristic of a covalent compound?
 - High melting point
 - Conducts electricity when it is in the molten state
 - Consists of molecules
 - Always soluble in water
 - Ammonium hydroxide will produce a reddish brown precipitate when added to a solution of
 - CuSO_4
 - $\text{Zn}(\text{NO}_3)_2$
 - FeSO_4
 - FeCl_3
 - A salt which in solution gives a bluish white precipitate with NaOH solution and a white precipitate with BaCl_2 solution is
 - CuSO_4
 - $\text{Ca}(\text{NO}_3)_2$
 - FeSO_4
 - FeCl_3
- The questions below are related to the manufacture of ammonia.
 - Name the process.
 - In what ratio must the reactants be taken?
 - Name the catalyst used.
 - Give the equation for the manufacture of ammonia.
 - Ammonia can act as a reducing agent. Write a relevant equation for such reaction.
- Identify the following substances:
 - An acidic gas which gives dense white fumes with NH_3 .
 - An alkane whose molecular mass is 58 ($\text{H} = 1$; $\text{C} = 12$).
 - A solid which when kept in the open forms a solution after some time.
 - An alloy used in electrical fittings.
 - A metal which gives hydrogen gas on reacting with both dilute acid and alkali.
- Write equations for the following reactions:
 - Aluminium oxide and sodium hydroxide
 - Zinc and dilute sulphuric acid
 - Magnesium nitride and water
 - Concentrated sulphuric acid and sugar

- e. Copper with concentrated nitric acid
5. Name the following:
- Second member of the alkene series
 - First member of the alkane series
 - Third member of the aldehyde series
 - Second member of carboxylic acid
 - Fourth member of the alcohol series
6. Write the IUPAC names of the following compounds:



7. Answer the following accordingly
- What kind of particles will be present in a liquid compound which is a non-electrolyte?
 - If HX is a weak acid, what particles will be present in its dilute solution apart from those of water?
 - Cations are formed by ----- (loss/gain) of electrons, and anions are formed by the --
 - (loss/ gain) of electrons.
 - What ions must be present in a solution used for electroplating a particular metal?
 - Explain how electrolysis is an example of a redox reaction.
8. The following is a sketch of an electrolytic cell used in the extraction of aluminium.

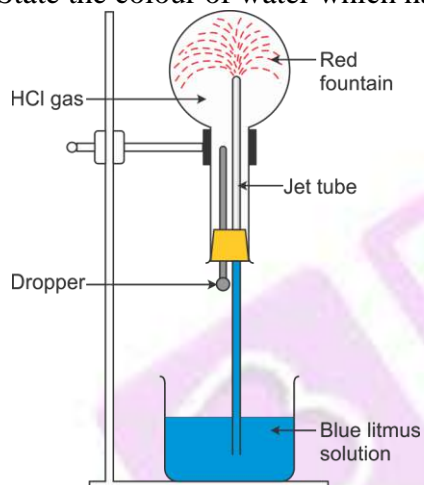


- What is the substance used in preparing electrodes A and B?
- At which electrode (A or B) is aluminium formed?
- Name the two aluminium compounds used as an electrolyte C.
- Why is it necessary for electrode B to be continuously replaced?

9. Zinc is extracted from zinc blende. The zinc blende is roasted. The solid product is mixed with coke in the blast furnace from which zinc vapours emerge.
- What is the zinc compound in zinc blende?
 - Write the equation for the roasting of zinc blende.
 - What is the purpose of using coke?
 - What is the reducing agent used in the extraction?
10. How does ammonium hydroxide help to distinguish between
- Iron (II) chloride and iron (III) chloride
 - Zinc sulphate and lead nitrate
 - Lead hydroxide and zinc hydroxide

11.

- Name the experiment illustrated below.
- State the colour of water which has entered the round bottom flask.



12. Name the method used for the preparation of the following salts from the list given below:
- Sodium nitrate
 - Iron (III) chloride
 - Lead chloride
 - Zinc sulphate
 - Sodium hydrogen sulphate

LIST:

- Simple displacement
 - Neutralisation
 - Decomposition by acid
 - Double decomposition
 - Direct synthesis
13. Write the balanced chemical equation to support each of the statements given below (use only dilute sulphuric acid).

- a. Basic oxide + acid \rightarrow salt + water
 - b. Metallic carbonate + acid \rightarrow salt + water + carbon dioxide
14. Predict the type of bonding in the following:
- a. Ammonia
 - b. Calcium oxide
 - c. Methane
15. A group of elements in the periodic table are given below (Boron is the first member of the group and Thallium is the last):
- | | | |
|---------|-----------|----------|
| Boron | Aluminium | |
| Gallium | Indium | Thallium |

Answer the following questions in relation to the above group of elements:

- a. Which element has the most metallic character?
 - b. Which elements would be expected to have the highest electronegativity?
 - c. If the electronic configuration of Aluminium is 2, 8, 3, how many electrons are present in the outer shell of Thallium?
 - d. The atomic number of Boron is 5. Write the chemical formula of the compound formed when Boron reacts with chlorine.
 - e. Will the elements in the group to the right of this Boron group be more metallic or less metallic in character? Justify your answer.
16. Anhydrous HCl is a poor conductor, while aq. HCl is an excellent conductor. Why?
17. Give reason:
- a. There are fumes in the air when the stopper of a bottle full of hydrogen chloride gas is opened.
 - b. Thick white fumes are formed when a glass rod dipped in NH_4OH is brought near the mouth of a bottle full of HCl gas.
18. Explain why dry hydrogen chloride gas does not affect a dry strip of blue litmus paper but it turns red in the presence of a drop of water.
19. Write a short note on why hydrogen chloride gas is not collected over water.
20. Mr Ramu wants to electroplate his keychain with nickel to prevent rusting. For this electroplating,
- a. Name the electrolyte
 - b. Name the cathode
 - c. Name the anode
 - d. Give the reaction at the cathode
 - e. Give the reaction at the anode