

Bangladesh International Tutorial
Subject: Chemistry Class VII Chapter:06

Week 1 Worksheet 1

1. Fill in the blanks:

..... and are good examples of native metals. Ores are from where we extract our desired metals. is the hydrated form of iron (III) oxide. and are needed for iron to rust. The name of the ore for iron is
..... is a good method for extracting highly reactive metals. The name of the ore for copper is Even though is a non-metal, it is used for the extraction of metals.

2. Short questions and answers

- a. What is rust? Write the word equation for the formation of rust.
- b. What are the ways of preventing rust?
- c. Draw a labelled diagram of a blast furnace.

3. True and False

- a. In the reactivity series, the least reactive metals are at the top and the most reactive metals are at their bottom.
- b. Limestone is one of the raw materials in the extraction of iron.
- c. Carbon is placed between iron and zinc in the reactivity series.
- d. Sulfur dioxide is the toxic gas that causes acid rain.
- e. An object made of iron can be coated with paint to prevent it from rusting.

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Week 1 Worksheet 2

1. Short questions and answers

a. The iron extracted from a blast furnace is still impure. How would you get pure iron?

b. What is sacrificial protection? Give three examples.

c. Even though carbon is a non-metal, it can be used for the extraction of certain metals- explain.

d. Will there be a reaction between iron oxide and tin? Explain your answer.

2. Complete the following equations:

a. $\text{Cu}_2\text{S} + \text{O}_2 \rightarrow \dots + \dots$

b. $\text{PbS} + \text{O}_2 \rightarrow \dots + \dots$

c. $\text{PbO} + \text{C} \rightarrow \dots + \dots$

Week 1 Worksheet 3

1. Define electrolysis.

2. a) If molten NaCl is electrolysed, what are the products that will form at the cathode and anode?

b) Write down the reactions that will take place at cathode and anode.

3. In order for electrolysis to take place, the electrolyte should be in a molten state or dissolved in water (solution) –Explain.

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Worksheet 1 Week 2

1. Fill in the Blanks:

The highly reactive metals can be extracted with The compounds breaks down into when electrolysis takes place. Most of the time inert electrodes such as and are used for electrolysis. For the electrolysis to take place, it is important that the electrolyte is in state. are positively charged ions and are negatively charged ions. Aluminium is extracted from its ore called
..... is a good example of an active electrode. ore contains a form of copper carbonate.

Worksheet 2 Week 2

1. True and False

- a. Covalent compounds can be broken down into ions through electrolysis.
- b. When electrolytes conduct, we see reactions at the electrodes.
- c. Metal ions are always attracted to cathode.
- d. During electrolysis the free electrons pass through the electrolyte.
- e. When copper chloride is electrolysed we get copper at the anode.

2. Write down the half-equations when molten copper chloride is electrolysed.

Worksheet 3 Week 2

1. True and False

- a. When lead bromide is electrolysed we get lead at the cathode.
- b. Aluminium gives up 3 electrons to turn into Al^{3+} ion.
- c. In the electrolysis of a highly reactive metal, it is the hydrogen not the metal that is given off at the cathode.
- d. Copper is a bad conductor of electricity.
- e. Reduction is the gain of electrons.

2. Write down the half-equations when molten aluminium oxide is electrolysed.

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Worksheet 1 Week 3

1. What are electrodes and electrolytes?
2. Draw a simple circuit for electrolysis.
3. a) What are cations and anions?
b) Give two examples cations and anions.

Worksheet 2 Week 3

1. True and False
 - a. Carbon is a good example of inert electrode.
 - b. Metal ions are negatively charged and non-metal ions are positively charged.
 - c. Negatively charged ions are attracted by the cathode.
 - d. Positively charged ions are attracted by the anode.
 - e. An ionic compound can be broken down by electrolysis when it is in solid state.
2. Complete the following table:

Ionic compound (molten)	Cathode	Anode
NaCl		
PbBr ₂		

Worksheet 3 Week 3

1. Write down the function of the following parts in a simple electrolysis circuit
 - a. Electrode
 - b. Bulb
 - c. Battery
 - d. Electrolyte
2. How do the electrons flow through the electrolysis circuit? Draw a diagram showing the flow of electrons.

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