4. Electrochemistry

Starter Quiz ·

IGCSE Chemistry Name: _____ Score: _____

1. Electrolysis is the breaking down of a compound using:

   ☐ heat only

   ☐ light

   ☐ a catalyst

   ☐ an electric current

2. In OIL RIG, oxidation is:

   ☐ loss of protons

   ☐ loss of electrons

   ☐ gain of electrons

   ☐ gain of neutrons

3. Electrolysing copper sulfate with copper electrodes is used to:

   ☐ electroplate silver

   ☐ purify copper

   ☐ produce sodium

   ☐ make oxygen

4. The only product of a hydrogen–oxygen fuel cell is:

   ☐ carbon dioxide

   ☐ oxygen

   ☐ methane

   ☐ water

5. Positive ions move towards the:

   ☐ anode (positive electrode)

   ☐ electrolyte

   ☐ cathode (negative electrode)

   ☐ power supply

6. Reduction is the loss of electrons.

   ☐ True ☐ False

7. Why is electroplating used? (Select all that apply.)

   ☐ to protect from corrosion

   ☐ to melt the object

   ☐ to make a cheap object look expensive

   ☐ to improve appearance

   Tick every correct option.

8. A drawback of fuel cells is that hydrogen is difficult to store and transport.

   ☐ True ☐ False

9. Negative ions move towards the negative cathode.

   ☐ True ☐ False

10. At the cathode, positive ions _____ electrons.

    _____

IGCSE Chemistry

1. **an electric current**

   An electric current decomposes the electrolyte.

2. **loss of electrons**

   Oxidation Is Loss of electrons.

3. **purify copper**

   The impure copper anode dissolves; pure copper deposits on the cathode.

4. **water**

   Hydrogen + oxygen → water.

5. **cathode (negative electrode)**

   Opposite charges attract: positive ions → negative cathode.

6. **False**

   False. Reduction is the gain of electrons; oxidation is the loss. Remember OIL RIG.

7. **to protect from corrosion; to make a cheap object look expensive; to improve appearance**

   Electroplating coats, not melts.

8. **True**

   Hydrogen storage is a major challenge.

9. **False**

   False. Opposite charges attract, so negative ions (anions) move to the positive anode, and positive ions move to the cathode.

10. **gain**

    Cathode = reduction = gain of electrons.