

Chemical Effect of Electric Current

DPP – 1

- Gold leaf electroscope is device to:
 - Detect current
 - Measure voltage
 - Detect electric charge
 - None of these
- By convention, a negatively charged body has potential when compared to the potential of a positively charged body:
 - same
 - less
 - more
 - none of these
- This electrical symbol represents:
 - Closed plug key
 - Variable Resistor
 - Fixed Resistor
 - Secondary battery
- Choose wrong statement:
 - Static electricity deals with charge at rest
 - Current electricity deals with study of charge in motion
 - Electroscope is used to detect charge & identifying its polarity
 - When glass rod rubbed with silk it develops negative charge
- What is not true for electric charge :
 - Electric charge is scalar quantity
 - Charge is of type +ve & -ve
 - S.I. unit of charge is coulomb
 - One coulomb is charge of one electron
- When a body is negatively charged by friction, it means:
 - The body has acquired excess of electrons
 - The body has acquired excess of proton
 - The body has lost some electrons
 - The body has lost some neutrons
- If a positive charged body attracts another body, the charge on the other body:
 - Must be -ve or zero
 - Must be +ve
 - Must be zero
 - May be +ve or -ve or zero
- Which of the following charge is not possible:
 - $1.6 \times 10^{-19} \text{C}$
 - 1C
 - 2C
 - $2 \times 10^{-19} \text{C}$
- Current between two points will not flow if:
 - both the points have same potential
 - circuit is open
 - potential difference between the points is zero
 - all of them
- Electric current flows from:
 - +ve to -ve electrode of cell
 - ve to +ve electrode of cell
 - A and B both
 - None of these
- Can charge be created?
- Give properties of an electric charge.
- If 8A current is flowing through a conductor for 2 s. Then find the number of electrons passing through that conductor in 2 s.
- How much charge flows through a wire in 10 minutes if the current through it is 2.5 A?
- If I is the current through a wire and e is the charge of electron, then the number of electrons in t sec. will be?

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DPP – 2

- When a glass rod is rubbed with silk, it acquires a positive charge because:

(A) Electrons are added to it	(C) Protons are removed from it
(B) Protons are added to it	(D) Electrons are removed from it
- Container in which electrolysis occur is :

(A) Voltmeter	(C) both (A) and (B)
(B) Voltmeter	(D) neither (A) nor (B)
- Cathode is :

(A) positively charged electrode	
(B) negatively charged electrode	
(C) a positively charged ion formed in the electrolyte	
(D) a negatively charged ion formed in the electrolyte	
- Which of the following process is done by using electrolysis?

(A) Purification of metals	(C) Electroplating
(B) Extraction of metals	(D) All of these
- Liquids that conduct electricity are solution of

(A) acid	(C) base
(B) pure metal	(D) plastic

Paragraph for Q.No. 6 to 8

Due to ionization, CuSO_4 solution is dissociated. Thus, copper gets deposited on the cathode, while the anode loses an equivalent amount of copper. The concentration of CuSO_4 in the solution remains unchanged. Electrolysis of water is the decomposition of water (H_2O) into oxygen (O_2) and hydrogen gas (H_2) due to the passage of electric current through water.

- After dissociation of CuSO_4 , Cu^{2+} ion goes towards –

(A) Anode	(C) Both (A) & (B)
(B) Cathode	(D) None of these
- After dissociation of CuSO_4 , SO_4^{2-} ion goes towards

(A) Anode	(C) Both (A) & (B)
(B) Cathode	(D) None of these
- Electrolysis of water is the decomposition of water is :

(A) Oxygen and hydrogen	(C) Carbon-dioxide
(B) Chlorine and hydrogen	(D) Sulphur-dioxide

Paragraph for Q.No. 9 to 10

Due to the heating effect of current, the filament of the bulb gets heated to a high temperature and it starts glowing. However, if the current is very weak the filament doesn't get heated sufficiently and it does not glow. That is why in some situations, even though the liquid is conducting, the bulb may not glow. Hence, it is preferable to classify materials as good conductors and poor conductors instead of conductors and insulators.

- Bulb glows due to –

(A) Heating effect of current	(C) magnetic effect of current
(B) Chemical effect of current	(D) None of these
- Which of the following is best conductor of electric current?

(A) Copper	(C) Silver
(B) Iron	(D) Mercury

11. State the three methods of charging a body.
12. Draw a labelled diagram of a circuit containing ammeter, voltmeter, cell, and resistor.
13. Which physical quantity is measured in ampere? Define it. Which instrument is used to measure it and how it is connected in circuit?
14. Explain the process of Electroplating with the help of an example.
15. Give some applications of the chemical effect of current.



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DPP – 3

- If two ends of a wire are dipped in distilled water, the compass needle brought near the circuit
 - keep moving anticlockwise
 - keep moving clockwise
 - remain still.
 - would show deflection.
- Battery is having :
 - Two or more cells connected to each other in any manner.
 - Positive terminal of one cell is connected to the positive terminal of the next cell.
 - Two or more cells connected in such a way that the positive terminal of one cell is connected to the negative terminal of the next.
 - Only one cell.
- During electrolysis, copper sulphate solution dissociates into
 - copper metal only.
 - copper ions only.
 - sulphate ions only.
 - copper ions and sulphate ions.
- Switch can be connected
 - to the positive terminal of the battery only.
 - any where in between the circuit elements within the circuit.
 - to the negative terminal of the battery only.
 - first to the positive terminal and then to the negative terminal of the battery.
- Bicycle handle bars are usually
 - tin plated.
 - chromium plated.
 - zinc plated.
 - gold plated.
- Metals can be extracted from their ores by the method of
 - electroplating.
 - electrolysis.
 - conduction.
 - mining.
- When HCL acid is used as a conducting liquid in an electric circuit, the products formed are
 - only hydrogen gas.
 - only chlorine gas.
 - only nitrogen gas.
 - both (A) & (B)
- If a LED glows when the conducting liquid is tomato juice, it means that compass needle will
 - also deflect.
 - remain still.
 - move clockwise
 - move anticlockwise
- The process of depositing a layer of any desired metal on another material by means of electricity is called
 - Electroscoping
 - Electroplating
 - Plating
 - Electroscoping
- A non-conductor of electricity is
 - a metal.
 - acid solution in water.
 - a metallic salt solution.
 - distilled water.
- When electric current is passed through tap water, we get
 - nitrogen gas.
 - only hydrogen gas.
 - only oxygen gas.
 - both (B) & (C)
- The process by which water is broken into H_2 and O_2 by passing electricity is an example of:
 - electroplating.
 - electric breakdown.
 - electrolysis.
 - chemical process.
- Explain the term magnetic effects of an electric current.
- Define electrolysis.
- What happens when an electric current is passed through the copper sulphate solution?