

Date: -  
Jan 20, 2025

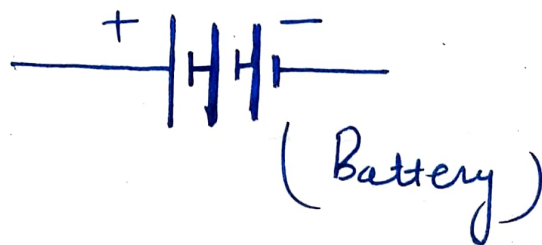
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Subject - PHYSICS

CLASS - VIII Ch - Electricity Continue

Question 11 : → How will you obtain a source of large <sup>(d.c.)</sup> direct current? show it with the help of diagram.

Ans : → When a source of strong direct current is needed we join a number of cells together in series to form a battery.



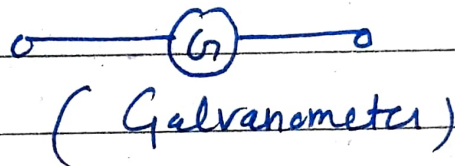
Qus 12 : → Distinguish between direct current and alternating current?

| <u>Ans</u> | Direct Current<br>(d.c.)                             | Alternating Current<br>(A.C.)                                              |
|------------|------------------------------------------------------|----------------------------------------------------------------------------|
| ①          | It is a current of constant magnitude and direction. | ① It is a current for which both magnitude and direction change with time. |
| ②          | Sources of direct current are cell and a battery.    | ② alternating current source is mains in our house and a.c generator.      |

Q13 :→ State function of galvanometer in an electric circuit? What is the symbol of galvanometer?

Ans :→ It is used to detect very weak current in an electric circuit. It is always joined in a circuit in series.

Symbol :→



Qus14 :→ What is the direction of flow of current?

Ans :→ Conventionally, the direction of current is from positive terminal to negative terminal of a current source (Opposite to the direction of flow of electrons).

Numericals :→

① A charge of 0.5C passes through a cross-section of a conductor in 5s. Find the current.

Ans

Charge (Q) = 0.5C  
time (t) = 5sec.

$I = ?$

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$$\text{as Current (I)} = \frac{\text{Charge}}{\text{time}} = \frac{Q}{t} = \frac{0.5 \text{ C}}{5}$$

$$= \frac{0.5}{10 \times 5} = \frac{1}{10} = 0.1$$

$$\boxed{I = 0.1 \text{ A}} \text{ Ans}$$

- ② A current of 1.5 A flows through a conductor for 2.0 sec. What amount of charge passes through the conductor?

Ans

$$I = 1.5 \text{ A}, Q = ?$$

$$t = 2 \text{ sec.}$$

$$I = \frac{Q}{t}; Q = It$$

$$Q = 1.5 \times 2 = \frac{15}{10} \times 2 = 3$$

$$\boxed{Q = 3 \text{ C}} \text{ Ans}$$

- ③ When a starter motor of a car is switched on for 0.8 sec, a charge 24 C passes through the coil of the motor. Calculate the current in the coil.

Ans

$$t = 0.8 \text{ sec}$$

$$Q = 24 \text{ C}$$

$$I = ?$$

$$I = \frac{Q}{t}$$

$$I = \frac{24}{0.8} = \frac{24 \times 10}{8} = 30 \text{ A}$$

$$\boxed{I = 30 \text{ A}} \text{ Ans}$$