

**Class-X**

**Physics**

**Date:-27/04/2020**

**Chapter-12 (Electricity)**

❖ Answer the following questions

1. Write down the symbols and the S.I units of the following quantities

(a) Charge

(b) Current

(c) Work

(d) Potential difference

2. If two coulomb charge is flowing per second between two points of a circuit and work done is 50 joule, then find the potential difference between those points.

❖ Answers of the previous day homework

1. Potential difference between two points A and B is 5V. How much work is done to move 2C charge between these two points?

**Answer-**

We know that,

$$\text{Potential difference} = \frac{\text{work done}}{\text{charge}}$$

Or, work done = Potential difference × charge

$$\text{work done} = 5V \times 2C$$

work done = 10 joule.

2. A 12V battery is connected to a device. If 1A current is flowing through it, then how much work is done in 1 minute?

**Answer-**

Current = 1A

This means 1C charge is flowing per second

Therefore, total charge that flows in 1 minute is

$$= 1\text{C} \times 60$$

$$= 60\text{C}$$

We know that,  $V = \frac{w}{q}$

Or,

$$w = q \times V$$

$$w = 60\text{C} \times 12\text{V}$$

$$w = 720 \text{ joule}$$

Thus, 720 joule work is done in 1 minute.

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