UDAAN 3.0 2024

Electricity

DHA-01

1. How much charge does flow through an electric bulb when a current of 0.5 A flows for an hour?
(A) 1400 C
(B) 1600 C
(C) 1800 C
(D) 2000 C

2. What is electric current?
(A) Rate of change of voltage
(B) Rate of change of resistance
(C) Rate of flow of charge
(D) Rate of flow of power

3. A lamp is connected to a battery. The current in the lamp is 0.32 A. The charge of an electron is 1.6×10^{-19} C. How many electrons flow through the lamp in 1 min?
(A) 1.2×10^{19}
(B) 1.2×10^{20}
(C) 1.2×10^{21}
(D) 1.2×10^{21}

4. Which is a unit of current?
(A) $C\ V^{-1}$ (B) $C\ s$
(C) $C\ s^{-1}$ (D) CV

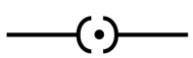
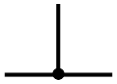
5. If 50 C of charge flows through a point in an electric circuit in 10 s, what is the current passing through that point?
(A) 0.2 A (B) 5 A
(C) 60 A (D) 500 A

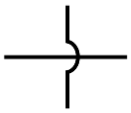
6. Which device maintains a potential difference across a conductor?
(A) Cell or battery eliminator
(B) Ammeter
(C) Voltmeter
(D) None of these

7. Electric current flows through a metallic conductor from its one end *A* to other end *B*. Which end of the conductor is at higher potential?
(A) End *A*
(B) End *B*
(C) Both ends *A* and *B*
(D) Neither *A* nor *B*

8. What is the SI unit of electric potential?
(A) joule
(B) coulomb
(C) volt
(D) joule per second

9. Which of the following circuit symbols correctly shows a wire joint?

(A)  (B) 

(C)  (D)

Note: Kindly find the Video Solution of DHAs Questions in the DPPs Section.

ANSWERS KEY

1.	**(C)**	**6.**	**(A)**
2.	**(C)**	**7.**	**(A)**
3.	**(B)**	**8.**	**(C)**
4.	**(C)**	**9.**	**(B)**
5.	**(B)**		

Hint and Solutions

1. **(C)**
Use $Q = It$

2. **(C)**
Current is rate of flow of charge.

3. **(B)**
Use $Q = It = ne$

4. **(C)**
Current (I) = $= \frac{Q}{t} = \frac{C}{S} = CS^{-1}$

5. **(B)**
Use $Q = It$

6. **(A)**
Battery or cell maintains voltage in the circuit

7. **(A)**
Current flows from higher to lower potential.

8. **(C)**
S.I. unit of electric potential is volt.

9. **(B)**
Current is divided at a wire joint.