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TARGET : NEET (UG) 2024

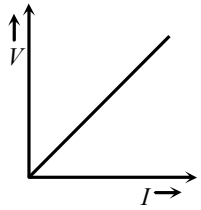
Course : SARANSH (Youtube Live CRASH COURSE)

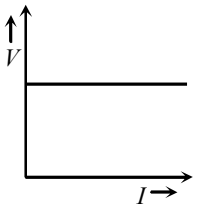
PHYSICS
DPP
DAILY PRACTICE PROBLEMS
DPP NO. 1

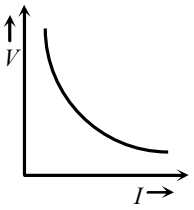
PHYSICS: CURRENT ELECTRICITY

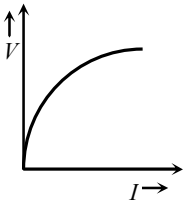
DPP No. : 1

1. Which of the adjoining graphs represents *ohm*ic resistance

(1) 

(2) 

(3) 

(4) 

2. Drift velocity v_d varies with the intensity of electric field as per the relation

(1) $v_d \propto E$ (2) $v_d \propto \frac{1}{E}$ (3) $v_d = \text{constant}$ (4) $v_d \propto E^2$

3. A car has a fresh battery of e.m.f. 12 *V* and internal resistance of 0.05 Ω. If the starter motor draws a current of 90 *A*, the terminal voltage when the starter is on will be

(1) 12 *V* (2) 10.5 *V* (3) 8.5 *V* (4) 7.5 *V*

4. If nearly 10^5 C liberate 1 g equivalent of aluminium, then the amount of aluminium (equivalent weight 9) deposited through electrolysis in 20 min by a current of 50 amp will be :

(1) 0.6 g (2) 0.09 g (3) 5.4 g (4) 10.8 g

5. The drift velocity of electrons in a conducting wire is of the order of 1mm/s, yet the bulb glows very quickly after the switch is put on because

(1) The random speed of electrons is very high, of the order of 10^6 m/s

(2) The electrons transfer their energy very quickly through collisions

(3) Electric field is set up in the wire very quickly, producing a current through each cross section, almost instantaneously

(4) All of above

6. A piece of copper and another of germanium are cooled from room temperature to 80 K. The resistance of :

(1) each of the them increases

(2) each of them decreases

(3) copper increases and germanium decreases

(4) copper decreases and germanium increases

7. In an electric circuit containing a battery, the positive charge inside the battery

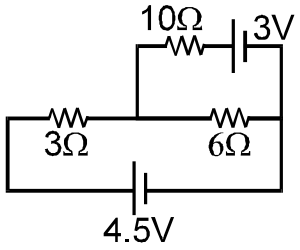
(1) always goes from the positive terminal to the negative terminal

(2) may go from the positive terminal to the negative terminal

(3) always goes from the negative terminal to the positive terminal

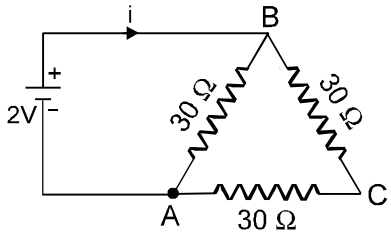
(4) does not move.

8. Find the current through the 10 Ω resistor shown in figure



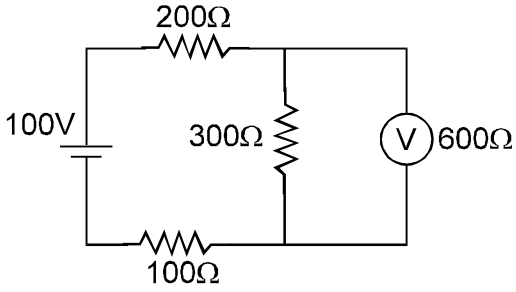
(1) zero (2) 1 A (3) 2A (4) 5 A

9. The current i in the circuit of figure is -



(1) $\frac{1}{45}$amp. (2) $\frac{1}{15}$amp. (3) $\frac{1}{10}$amp. (4) $\frac{1}{5}$amp.

10. The reading of voltmeter is



(1) 50V (2) 60 V (3) 40V (4) 80 V