

ECAT Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	A 50 volt battery is connected across 10 ohm resistor. The current is 4.5 A. The internal resistance of the battery is	A. Zero B. 0.5 Ω C. 1.1 Ω D. 5.0 Ω
2	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
3	The resistivity of a substance depends upon the	A. length B. mass C. area D. temperature
4	If one volt is needed to cause a current of one ampere to flow in a conductor, its resistance is	A. one ohm B. one joule C. one volt D. one ampere
5	Equal charges are given to two spheres of different radii. The potential will	A. Be more on the smaller sphere B. Be more on the bigger sphere C. Be equal on both the sphere D. Depend on the nature of the material of the sphere
6	Cause of heat production in a current carrying conductor is	A. Collisions of free electrons with one another B. High drift speed of free electrons C. Collisions of free electrons with atoms or ions of conductor D. High resistance value
7	Consider a spherical shell of metal at the centre of which a positive point charge is kept	A. The electric field is zero outside the shell B. The electric field is zero everywhere C. The electric field is zero in the region inside the shell D. The electric field is non-zero in both regions outside and inside the shell
8	Resistance of a conductor depends upon	A. the quantity of current passing through it B. the voltage applied between its end C. its dimensions, physical state and nature of its material D. all of the above
9	The material in the form of wire or rod or plate which leads the current into or out of the electrolyte is known as	A. voltmeters B. resistance C. electrode D. current
10	The electric flux from a closed surface	A. Is independent of the shape of the surface B. Depends on the charge enclosed by the surface

		<p>C. Both a and b</p> <p>D. None of the above</p>
11	Taking the earth to be a spherical conductor of diameter 12.8×10^3 km. Its capacity will be	<p>A. $711 \mu\text{F}$</p> <p>B. $611 \mu\text{F}$</p> <p>C. $811 \mu\text{F}$</p> <p>D. $511 \mu\text{F}$</p>
12	Coulomb's force between two point charges depends upon	<p>A. Magnitude of charges</p> <p>B. Distance between them</p> <p>C. Medium in which they are located</p> <p>D. All of the above</p>
13	Some charge is being given to a conductor. Then its potential	<p>A. Is maximum at surface</p> <p>B. Is maximum at centre</p> <p>C. Is remain same throughout the conductor</p> <p>D. Is maximum somewhere between surface and centre</p>
14	The SI unit of capacitance is	<p>A. Farad</p> <p>B. Henry</p> <p>C. Ohm</p> <p>D. Volt</p>
15	Which one of the following causes production of heat when current is set up in a wire?	<p>A. Fall of electrons from higher orbits to lower orbits</p> <p>B. Inter-atomic collisions</p> <p>C. Inter-electron collisions</p> <p>D. Collisions of conduction electron with atoms</p>
16	Solar cell converts sunlight directly into	<p>A. potential energy</p> <p>B. thermal energy</p> <p>C. mechanical energy</p> <p>D. electrical energy</p>
17	The energy stored in a charge capacitor	<p>A. $\frac{1}{2}CV^2$</p> <p>B. $\frac{1}{2}C^2V^2$</p> <p>C. $\frac{1}{2}C/V^2$</p> <p>D. None of these</p>
18	A 10 F capacitor is charged to a potential difference of 50 V and is connected to another uncharged capacitor in parallel. Now the common potential difference becomes 20 volt. The capacitance of second capacitor is	<p>A. $10 \mu\text{F}$</p> <p>B. $20 \mu\text{F}$</p> <p>C. $30 \mu\text{F}$</p> <p>D. $15 \mu\text{F}$</p>
19	Which one of the following has larger value of relative permittivity ϵ_r at room temperature?	<p>A. Vacuum</p> <p>B. Air</p> <p>C. Glass</p> <p>D. Water</p>
		<p>A. $288 \times 10^3 \text{ J}$</p> <p>B. $288 \times 10^2 \text{ J}$</p>

If a 40 watt light bulb burns for 2 hours. how much heat is generated

- B. 400×10^{10} J
 - C. 288×10^5 J
 - D. 288×10^6 J
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