

ECAT Pre General Science Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	Potentiometer is more sensitive than voltmeter, because	A. Voltmeter has a very high resistance B. Voltmeter has a very low resistance C. Potentiometer does not draw any current from a source of unknown potential difference D. Potentiometer is sensitive
2	The unit of intensity of electric field is	A. newton/coulomb B. jule/coulomb C. volt x metre D. newton/metre
3	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
4	If the length of the conductor is double and its cross sectional area is halved, its conductance will	A. Increase four fold B. Become one-fourth C. Become one-half D. Remains unchanged
5	A condenser of capacity $50\mu\text{F}$ is charged to 10 V. The energy stored is	A. $1.25 \times 10^{-3}\text{J}$ B. $3.75 \times 10^{-3}\text{J}$ C. $2.5 \times 10^{-3}\text{J}$ D. $5 \times 10^{-3}\text{J}$
6	The resistance of an incandescent lamp is	A. Smaller when switched on B. Greater when switched off C. The same whether it is switched off or on D. Greater when switched on
7	The powers of two electric bulbs are 100 W and 200 W. Both of them are joined with 220 V mains. The ratio of resistances of their filaments will be	A. 1 : 2 B. 2 : 1 C. 1 : 4 D. 4 : 1
8	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
9	Electron volt is the unit of.	A. Potential difference B. Energy C. Resistance D. Capacitance
10	Resistance of a conductor depends upon	A. the quantity of current passing through it B. the voltage applied between its ends C. its dimensions, physical state and nature of its material D. all of the above
11	The electric potential at the surface of an atomic nucleus ($Z = 50$) of radius $9.0 \times 10^{-15}\text{m}$ is	A. $9 \times 10^5\text{V}$ B. 9 V C. $8 \times 10^6\text{V}$ D. 80 V

12	Question Image	<p>34); font-family: &quot;Times New Roman&quot;; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);">μF</p> <p>C. 3μF</p> <p>D. 6μF</p>
13	Cause of heat production in a current carrying conductor is	<p>A. Collisions of free electrons with one another</p> <p>B. High drift speed of free electrons</p> <p>C. Collisions of free electrons with atoms or ions of conductor</p> <p>D. High resistance value</p>
14	A medium of dielectric constant 'K' is introduced between the plates of parallel plate condenser. As a result its capacitance	<p>A. Increase k time</p> <p>B. Decreases k times</p> <p>C. Decreases 1/K times</p> <p>D. Remains unchanged</p>
15	Heating effect caused by an electric circuit is written	<p>A. $H = I^2 R t$</p> <p>B. $H = I^2 R$</p> <p>C. $H = I R^2 t$</p> <p>D. $H = I R^2 / t$</p>
16	The relation between charge 'Q' and current 'I' is given by	<p>A. $Q = I t$</p> <p>B. $Q = I t$</p> <p>C. $Q = I^2 t$</p> <p>D. $Q = I^2 / t$</p>
17	Three resistors of resistance 2,3 and 6 ohms are connected in parallel, their equivalent resistance is	<p>A. 11.0 ohm</p> <p>B. 1.0 ohm</p> <p>C. 7.0 ohm</p> <p>D. 3.0 ohm</p>
18	The earth's potential is taken as	<p>A. Negative</p> <p>B. Positive</p> <p>C. Zero</p> <p>D. Infinite</p>
19	The unit of conductance is	<p>A. ohm</p> <p>B. meter</p> <p>C. mho</p> <p>D. ohm-meter</p>
20	If the distance of separation between two charges is increased, the electrical potential energy of the system will	<p>A. Increase</p> <p>B. Decrease</p> <p>C. May increase or decrease</p> <p>D. Remain the same</p>