ECAT Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	Ohm established a relation between	A. voltage and resistance B. voltage and charge C. voltage and current D. voltage resistance and charge
2	Which one of the following has larger value of relative permitivity E_r at room temperature?	A. Vaccum B. Air C. Glass D. Water
3	If the resistance of 2 ohm and 4 ohm are connected in parallel, the equivalent resistance will be	A. 6 ohm B. 4 ohm C. zero ohm D. 1.33 ohm
4	Electric flux is defined by the relation	A. E.A. B. E x A C. E/A D. none of these
5	10^6 electrons are moving through a wire per second, the current developed is	A. 1.6×10^{-19} B. 1 A C. 1.6×10^{-15} A D. 10^6 A
6	The capacity of a parallel plat capacitor depends on the	A. Type to metal used B. Thickness of plates C. Potential applied across the plates D. Separation between the plates
7	The resistance of 20 cm long wire is $10\,\Omega$. When the length is changed to 40 cm. The new resistance is	A. $10\,\Omega$ B. $20\,\Omega$ C. $30\,\Omega$ D. $40\,\Omega$
8	A parallel plate capacitor is first charged and then a dielectric slab is introduced between the plates. The quantity that remains unchanged is	A. Charge Q B. Potential V C. Capacity D. Energy U
9	When an electron is accelerated through a P.D. of an one volt, it will acquire energy equal to	A. One joule B. One erg C. One electron volt D. None of these
10	Electric generators which convert mechanical energy into	A. solar energy B. thermal energy C. kinetic energy D. electrical energy
11	A condenser of capacity $50\,\mu F$ is charged to 10 V. The energy stored is	A. 1.25×10^{-3} J B. 3.75×10^{-3} J C. 2.5×10^{-3} J D. 5×10^{-3} J

#	Question	Options
12	If we increase the distance between two plates of the capacitor, the capacitance will	A. Increase **B. Decrease** C. Remain same D. First increase then decrease
13	Three resistors of resistance R each are combined in various ways. Which of the following cannot be obtained?	A. $3R\ \Omega$ **B. $2R/4\ \Omega$** C. $R/3\ \Omega$ D. $2R/3\ \Omega$
14	Ohm's law states that	A. The current through a resistor is directly proportional to the applied voltage B. The voltage across a resistor is directly proportional to the current passing through it C. Resistance is the constant of proportionality between the voltage and current **D. all of these**
15	The statement "the electric force of repulsion or attraction between two point charges is directly proportional to the product of the charges and inversely proportional to square of the distance between them" refer to	**A. Coulomb's law** B. Gauss's law C. Biot-Sarwat law D. Ampere's law
16	The electric potential at the surface of an atomic nucleus (Z = 50) of radius 9.0×10^{-15} is	A. 9×10^5 V B. 9 V **C. 8×10^6 V** D. 80 V
17	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
18	If the two charges in Coulomb's law have double distance between them, then electric force	A. Becomes two-fold B. Becomes four-fold **C. Remains the same** D. None of these
19	Electron volt is the unit of	A. Potential difference **B. Energy** C. Resistance D. Capacitance
20	The minimum resistance that can be obtained by connecting 5 resistance of $1/4\ \Omega$ each is	A. $4/5\ \Omega$ B. $5/4\ \Omega$ C. $20\ \Omega$ **D. $0.05\ \Omega$**

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