

Physics ECAT Pre Engineering Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	Which of the following does not obey ohm's law?	A. Copper B. Al C. Diode D. None
2	The value of electrical constant of proportionality k is	A. $9 \times 10^9 \text{ Nm}^2/\text{C}^2$ B. $9 \times 10^{-9} \text{ Nm}^2/\text{C}^2$ C. $9 \times 10^{10} \text{ Nm}^2/\text{C}^2$ D. $9.85 \times 10^{-12} \text{ Nm}^2/\text{C}^2$
3	A certain charge liberates 0.8 g of oxygen. The same charge will liberate. how many g of silver?	A. 108 g B. 10.8 g C. 0.8 g D. $108/0.8$ g
4	Heating effect caused by an electric circuit is written	A. $H = I^2 R t$ B. $H = I^2 R$ C. $H = I R^2 t$ D. $H = I R^2$
5	If 2.2 kilowatt power is transmitted through 1 10 ohm line at 22000 volt, the power loss in the form of heat will be	A. 0.1 watt B. 1 watt C. 10 watt D. 100 watt
6	A 100 W, 200 V bulb is connected to a 160 volts supply. The actual power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
7	The unit of intensity of electric field is	A. newton/coulomb B. jule/coulomb C. volt x metre D. newton/metre
8	The resistance of the given conductor can be increased by	A. Increasing the area B. Changing resistivity C. Decreasing the length D. None of the above because change does not matter because in any case the volume remains the same
9	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
10	A wire of radius r has resistance R. If it is stretched to a wire of r/2 radius, then the resistance becomes	A. 2R B. 4R C. 16R D. Zero
11	The minimum charge on any object can not be less than	A. $1.6 \times 10^{-19} \text{ C}$ B. $3.2 \times 10^{-19} \text{ C}$ C. 1.0 C D. $4.8 \times 10^{-19} \text{ C}$
12	The electric lines of force are	A. Imaginary B. Physically existing everywhere C. Physically existing near the charge D. All of the above
13	At ordinary temperature, an increase in temperature increases the conductivity of	A. Conductor B. Semiconductor C. Insulator D. Alloy
14	One moving a charge of 20 coulombs by 2 cm, 2 J of work is done, then the potential difference between the points is	A. 0.1 V B. 8 V C. 2 V D. 20 V

D. 0.5 V

15	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
16	Surface density of charge is defined as	A. Charge per unit volume B. Charge per unit length C. Charge per unit area D. Charge per unit mass
17	Some charge is being given to a conductor. Then its potential	A. Is maximum at surface B. Is maximum at centre C. Is remain same throughout the conductor D. Is maximum somewhere between surface and centre
18	Coulomb's force between two point charges depends upon	A. Magnitude of charges B. Distance between them C. Medium in which they are located D. All of the above
19	In bringing an electron towards another electron, electrostatic potential energy of system	A. Decreases B. Increases C. Remains uncharged D. Becomes zero
20	The energy stored in a charge capacitor	A. $\frac{1}{2}CV^2$ B. $\frac{1}{2}C^2V$ C. $\frac{1}{2}C/V^2$ D. None of these