ECAT Pre General Science Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	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
2	Magnetic effect at a point caused due to flow a current depend upon the	A. Quantity of current B. Distance from current C. Both the quantity of current and distance from current element D. None of the all
3	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
4	Two electric bulbs of 200 W and 100 W have same voltage. If $R_1$and R_2be their resistance respectively then	A. R₁= 2R₂ B. R₂= 2R₁ C. R₂=4R₁ D. R₁= 4R₂
5	A charge Q is divided into two parts q and Q - q and separated by a distance R. The force of repulsion between them will be maximum when	A. q = Q/4 B. q = Q/2 C. q = ! D. None of these
6	The dot product of electric field intensity E and vector area A is called	A. Electric potential B. Electric flux C. Electric field D. Magnetic field
7	The SI unit of capacitance is	A. Farad B. Henry C. Ohm D. Volt
8	A sheet of aluminium foil of negligible thickness is introduced between the plates of a capacitor. The capacitance of the capacitor	A. Increases B. Decreases C. Remain unchanged D. Becomes infinite
9	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
10	The current through a metallic conductor is due to the motion of	A. protons B. neutrons C. electrons D. free electrons
11	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
12	A one microfarad capacitor of a TV is subjected to 4000 V potential difference. The energy stored in capacitor is	A. 8 J B. 16 J C. 4 x 10⁻³J D. 2 x 10⁻³J
13	For two resistance wires joined in parallel, the resultant resistance is 6/5 ohm. When one of the resistance wire breaks, the effective resistance becomes 2 ohm. The resistance of the broken wire is	A. 3/5 ohm B. 2 ohm C. 6/5 ohm D. 3 ohm

14	The electric field due to an infinite long thin wire at a distance R varies as	A. 1/R B. 1/R² C. R D. R²
15	An electron of charge e coulomb passes through a potential difference of V volts its energy in joules will be	A. V/e B. eV C. e/V D. V
16	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
17	The colour sequence in a carbon resistor in red, brown, orange and silver. The resistance of the resistor is	A. 21 x 10³<u>+</u> 10% B. 23 x 10¹<u>+</u> 10% C. 21 x 10³<u>+</u> 5% D. 12 x 10³<u>+</u> 5%
18	The force between two chares 0.06 m apart is 5 N. If each charge is moved towards the other by 0.01 m, then the force between them will become	A. 7.20 N B. 11.25 N C. 22.50 N D. 45.00
19	A 60 W bulb operates on 220 V supply. The current flowing through the bulb is	A. 11/3 A B. 3 A C. 3/11 A D. 6
20	The powers of tow 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