

Physics ECAT Pre Engineering Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	Current provided by a battery is maximum when	A. Internal resistance equal to external resistance B. Internal resistance is greater than external resistance C. Internal resistance is less then external resistance D. None of these
2	The charge carriers in gases are	A. electrons B. ions C. protons D. ions and electrons
3	The electric field intensity at a point due to a point charge	A. Falls off inversely as the distance B. Falls off inversely as the square of distance C. Remains unchanged with distance D. Increase directly as square of distance
4	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
5	The SI unit of electric flux is	A. Weber B. Nm ² C ⁻¹ C. NmC ⁻¹ D. Nm ⁻² C
6	Three resistance 500,500 and 50 ohms are connected in series across 555 volts mains. The current flowing through them will be	A. 0.52 A B. 1 mA C. 0.7 mA D. 1.4 A
7	The unit of resistance is	A. volt B. ampere C. ohm D. coat
8	The conventional current in a circuit is defined as " current which passes from a point at higher potential to a point at lower potential as if it represent a movement of	A. negative charges B. positive charges C. protons D. electrons
9	The excess (equal in number) of electrons that must be placed on each of two small spheres spaced 3 cm apart, with force of repulsion between the spheres to be 10 ⁻¹⁹ N, is	A. 25 B. 225 C. 625 D. 1250
10	The ratio of the gravitational force $\mathbf{F}_{\mathbf{g}}$ to the electrostatic force $\mathbf{F}_{\mathbf{e}}$ between two electrons at the same distance apart is approximately	A. 9.8 B. 24 x 10 ¹⁹ C. 24 x 10 ⁴² D. 24 x 10 ⁻⁴⁴
11	Which of the following does not obey ohm's law?	A. Copper B. Al C. Diode D. None
12	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
13	The electrode connected with the positive terminal of the current source is called	A. cathode B. anode C. electrolyte D. position
14	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

15	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
16	The potential difference across each resistance in series combination is	A. same B. different C. zero D. none of these
17	If the distance between the plates of a parallel plate condenser of capacity 10 μ F is doubled then new capacity will be	A. 5 µ F B. 20 µ F C. 10 µ F D. 15 µ F
18	Which of the following represents an electric current?	A. C ⁻¹ B. CS ⁻¹ C. J.S ⁻¹ D. dynes ⁻¹
19	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
20	What is the current is a 2 x 10^6 ohm resistor having a potential difference of 2 x 10^3 volts?	A. 10 ⁻¹ A B. 10 ⁻² A C. 10 ⁻⁴ A D. 1 mA