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	Which one of the following causes production of heat when current is set up in a wire?	A. Fall of electrons from higher orbits to lower orbits B. Inter-atomic collisions C. Inter-electron collisions D. Collisions of conduction electron with atoms
3	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
4	A capacitor is charged with a battery and then it is disconnected. A slab of dielectric is now inserted between the plates, then	A. The charge in the plates reduces and potential difference increase B. Potential difference between the plates increase, stored energy decreases and charge remains the same C. Potential difference between the plates decreases and charge remains unchanged D. None of the above
5	Cause of heat production in a current carrying conductor is	A. Collisions of free electrons with one another B. High drift speed of free electrons C. Collisions of free electrons with atoms or ions of conductor D. High resistance value
6	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
7	A charge of 0.1 c accelerated through a potential difference of 1000V acquires kinetic energy	A. 200 J B. 100 J C. 1000 J D. 400 J
8	If a 40 watt light bulb burns for 2 hours. how much heat is generated	A. 288 x 10³J B. 288 x 10⁸J C. 288 x 10⁵J D. 288 x 10⁶J
9	In a Milikian's oil drop experiment the charge on an oil drop is calculated to be 6.35×10^{-19}C. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
10	The current through a metallic conductor is due to the motion of	A. protons B. neutrons C. electrons D. free electrons
11	An alpha particle is accelerated through a potential difference of 10^6volt. Its kinetic energy will be	A. 1 MeV B. 2 MeV C. 4 MeV D. 8 MeV
12	Solar cell converts sunlight directly into	A. potential energy B. thermal energy C. mechanical energy D. electrical energy
		A. 200 W

13	A heater coil rated at (1000 W - 200 V) is connected to 110 volt line. What will be the power consumed?	B. 302.5 C. 250 W D. 350 W
14	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
15	10^6electrons are moving through a wire per second, the current developed is	A. 1.6 x 10⁻¹⁹ B. 1 A C. 1.6 x 10⁻¹⁵A D. 10⁶A
16	The capacitance of a parallel plate capacitor depends upon	A. Area of the plates B. Separation between the plates C. Medium between the plates D. All of the above
17	Electric potential of earth is taken to be zero because the earth is good	A. Semiconductor B. Conductor C. Insulator D. Dielectric
18	In a building, there are 15 bulbs of 40 watts, 5 bulbs of 100 watts, 5 fans of 80 watts and a heater of 1 kilowatt. The voltage of the electric main is 220 volts. The minimum efficiency of the main fuse of the building will be	A. 0.4 A B. 11.4 A C. 9.8 A D. 10.6 A
19	An electric charge at rest is	A. Only an electric field B. Only a magnetic field C. Both electric and magnetic fields D. None of the above
20	The electric intensity at infinite distance from the point charge will be	A. Infinite B. Positive C. Zero D. Negative