ECAT Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	Equal charges are given to two spheres of different radii. The potential will	A. Be more on the smaller sphere B. Be more on the bigger sphere C. Be equal on both the sphere D. Depend on the nature of the material of the sphere
2	A wire is bent into a ring of radius R is given a charge q. The magnitude of the electrical field at the centre of the ring is	A. Two B. 1/2 C. Zero D. 3/2
3	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
4	Electron volt is the unit of	A. Potential difference B. Energy C. Resistance D. Capacitance
5	Physicist George Simon ohm was a	A. German physical B. French physicist C. Chinese physicist D. Russian physicist
6	The force of repulsion between two point charges is F, when these are at a distance 0.1 m apart. Now the point charges are replaced by sphere of radii 5 cm each having the same charge as that of the respective point charges. The distance between their centre is again kept 0.1 m ; then the force of repulsion will	A. Increase B. Decrease C. Remain F D. Become 10F/9
7	A condenser of capacity 50μF is charged to 10 V.The energy stored is	A. 1.25 x 10⁻³J B. 3.75 x 10⁻³J C. 2.5 x 10⁻³J D. 5 x 10⁻³J
8	The unit of intensity of electric field is	A. newton/coluomb B. jule/coluomb C. volt x metre D. newton/metre
9	A heater coil rated at (1000 W - 200 V) is connected to 110 volt line. What will be the power consumed?	A. 200 W B. 302.5 C. 250 W D. 350 W
10	The electric field will be uniform	A. Near a positive point charge B. Near a negative point charge C. Between two oppositely charged parallel metal plates D. None of above
11	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
12	A car battery has e.m.f 12 volt and internal resistance 5 x 10^{-2}ohm. If it draws 60 ampere current, the terminal voltage of the battery will be	A. 5 volt B. 3 volt C. 15 volt D. 9 volt
13	The speed of randomly moving electrons depends upon	A. pressure B. volume C. temperature D. mass
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
		A. Shape

15	The nature of capacity of electrostatic capacitor depends on	B. Size C. Thickness of plates D. Area
16	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
17	Free electrons are	A. tightly bound B. fixed C. loosely bound D. tightly fixed
18	A (100 W , 200 W) bulb is connected to a 160 V power supply. The power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
19	Electric flux is defined by the relation	A. E.A. B. E x A C. E/A D. none of these
20	Which of the following does not obey ohm's law?	A. Copper B. Al C. Diode D. None