

ECAT Pre General Science Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	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
2	The SI unit of conductivity is	A. ohm-m B. ohm ⁻¹ m ⁻¹ C. ohm-m ⁻¹ D. ohm ⁻¹ m
3	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
4	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
5	Electric potential of earth is taken to be zero because the earth is good	A. Semiconductor B. Conductor C. Insulator D. Dielectric
6	Calculate the amount of charge flowing in 2 minutes in a wire of resistance 10 Ω when a potential difference of 20 V is applied between its ends	A. 120 C B. 240 C C. 20 C D. 4 C
7	The minimum charge on any object can not be less than	A. 1.6 x 10 ⁻¹⁹ C B. 3.2 x 10 ⁻¹⁹ C C. 1.0 C D. 4.8 x 10 ⁻¹⁹ C
8	A metal plate of thickness half the separation between the capacitor plates of capacitance C is inserted. The new capacitance is	A. C B. C/2 C. Zero D. 2C
9	Electric generators which convert mechanical energy into	A. solar energy B. thermal energy C. kinetic energy D. electrical energy
10	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. 0.5 V
11	The relation between the charge Q of a parallel plate capacitor and the P.D between its plates is	A. Q=V/C B. Q=C/V C. Q=1/2CV D. Q=CV
12	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
13	The thermistors are usually made of	A. Metals with low temperature coefficient of resistivity B. Metals with high temperature coefficient of resistivity C. Metal oxides with high temperature coefficient of resistivity D. Semi conducting materials having low temperature coefficient of resistivity
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14	Ohm is the unit of	A. current B. capacitance C. energy D. resistance
15	When three identical bulbs of 60 watt, 200 volt rating are connected in series to a 200 volt supply, the power drawn by them will be	A. 180 watt B. 10 watt C. 20 watt D. 60 watt
16	One coulomb of charge is created by	A. 10 electrons B. 1.6 x 10 ⁻¹⁹ electrons C. 6.25 x 10 ¹⁸ electrons D. 6.25 x 10 ²¹ electrons
17	The speed of randomly moving electrons depends upon	A. pressure B. volume C. temperature D. mass
18	A conducting wire is drawn to double its length. Final resistivity of the material will be	A. Double of the original one B. Half of the original one C. One fourth of the original one D. Same as original one
19	In a charged capacitor the energy is stored in	A. Both in positive and negative charges B. Positive charges C. The edges of the capacitor plates D. The electric field between the plates
20	The current through a metallic conductor is due to the motion of	A. protons B. neutrons C. electrons D. free electrons