

Physics ECAT Pre Engineering Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	In Pakistan electricity is supplied for domestic use at 220 V, it is supplied at 110 V in USA. If the resistance of a 60 W bulb for use in Pakistan is R, the resistance of a 60 W bulb for use in USA will be	A. 2 R B. R/4 C. R/2 D. R
2	A point charge Q is placed at the mid-point of a line joining two charges. 4q and q. if the net force on charge q is zero. then Q must be equal to	A. -q B. +q C. -2q D. +4q
3	The electric field due to an infinite long thin wire at a distance R varies as	A. 1/R B. 1/R ² C. R D. R ²
4	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
5	Question Image	A. $5 \mu\text{F}$ B. $10 \mu\text{F}$ C. $3 \mu\text{F}$ D. $6 \mu\text{F}$
6	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
7	Electric generators which convert mechanical energy into	A. solar energy B. thermal energy C. kinetic energy D. electrical energy
8	Coulomb's force between two point charges depends upon	A. Magnitude of charges B. Distance between them C. Medium in which they are located D. All of the above
9	What is the current in a 2×10^6 ohm resistor having a potential difference of 2×10^3 volts?	A. 10^{-1} A B. 10^{-2} A C. 10^{-4} A D. 1 mA
10	Two point charges A and B separated by a distance R attract each other with a force of 12×10^{-3} N. The force between A and B when the charges on them are doubled and distance is halved	A. 1.92 N B. 19.2 N C. 12 N D. 0.192 N
11	The ratio of the gravitational force F_g to the electrostatic force F_e between two electrons at the same distance apart is approximately	A. 9.8 B. 24×10^{19} C. 24×10^{42} D. 24×10^{-44}

12	The relation between the charge Q of a parallel plate capacitor and the P.D between its plates is	<p>A. $Q=V/C$ B. $Q=C/V$ C. $Q=1/2CV$ D. $Q=CV$</p>
13	The unit of resistivity is	<p>A. ohm B. ohm-m^2 C. ohm-meter D. ohm-m^{-1}</p>
14	A medium of dielectric constant 'K' is introduced between the plates of parallel plate condenser. As a result its capacitance	<p>A. Increase k time B. Decreases k times C. Decreases 1/K times D. Remains unchanged</p>
15	Electron volt is the unit of	<p>A. Potential difference B. Energy C. Resistance D. Capacitance</p>
16	The charge carriers in electrolyte are positive and negative	<p>A. protons B. electrons C. ions D. none of these</p>
17	Cause of heat production in a current carrying conductor is	<p>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</p>
18	One moving a charge of 20 coulombs by 2 cm, 2 J of work is done, then the potential difference between the points is	<p>A. 0.1 V B. 8 V C. 2 V D. 0.5 V</p>
19	An electric charge at rest is	<p>A. Only an electric field B. Only a magnetic field C. Both electric and magnetic fields D. None of the above</p>
20	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	<p>A. 180 watt B. 10 watt C. 20 watt D. 60 watt</p>