

ECAT Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	Current provided by a battery is maximum when	<p>A. Internal resistance equal to external resistance</p> <p>B. Internal resistance is greater than external resistance</p> <p>C. Internal resistance is less than external resistance</p> <p>D. None of these</p>
2	Electric generators which convert mechanical energy into	<p>A. solar energy</p> <p>B. thermal energy</p> <p>C. kinetic energy</p> <p>D. electrical energy</p>
3	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</p> <p>B. 8 V</p> <p>C. 2 V</p> <p>D. 0.5 V</p>
4	Force acting upon a charged particle kept between the plates of a charged condenser if F. IF one of the plates of the condenser is removed, force acting on the same will become	<p>A. Zero</p> <p>B. F/2</p> <p>C. F</p> <p>D. 2F</p>
5	Electric potential of earth is taken to be zero because the earth is good	<p>A. Semiconductor</p> <p>B. Conductor</p> <p>C. Insulator</p> <p>D. Dielectric</p>
6	The value of electrical constant of proportionality k is	<p>A. $9 \times 10^9 \text{ Nm}^2/\text{C}^2$</p> <p>B. $9 \times 10^9 \text{ Nm}^2/\text{C}^2$</p> <p>C. $9 \times 10^{10} \text{ Nm}^2/\text{C}^2$</p> <p>D. $9.85 \times 10^{12} \text{ Nm}^2/\text{C}^2$</p>
7	The unit of resistivity is	<p>A. ohm</p> <p>B. ohm-m^2</p> <p>C. ohm-meter</p> <p>D. ohm-m^{-1}</p>
8	Capacitance of two or more capacitors	<p>A. Increases in series combination</p> <p>B. Increases in parallel combination</p> <p>C. Remains unchanged</p> <p>D. None of the above</p>
9	Heating effect caused by an electric circuit is written	<p>A. $H = I^2 R t$</p> <p>B. $H = I^2 R$</p> <p>C. $H = IR^2 t$</p> <p>D. $H = IR^2$</p>
10	A heater coil rated at (1000 W - 200 V) is connected to 110 volt line. What will be the power consumed?	<p>A. 200 W</p> <p>B. 302.5</p> <p>C. 250 W</p> <p>D. 350 W</p>
11	Resistance of a conductor depends upon	<p>A. the quantity of current passing through it</p> <p>B. the voltage applied between its end</p> <p>C. its dimensions, physical state and nature of its material</p> <p>D. all of the above</p>
12	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</p> <p>B. 10 watt</p> <p>C. 20 watt</p> <p>D. 60 watt</p>
13	Electric flux is defined by the relation	<p>A. E.A.</p> <p>B. E x A</p> <p>C. E/A</p> <p>D. none of these</p>
14	Three resistance 50,50 and 50 ohms are connected in series across 555 volts mains. The current flowing through them will be	<p>A. 0.52 A</p> <p>B. 1 mA</p> <p>C. 0.7 mA</p> <p>D. . . .</p>

15	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</p> <p>B. Decreases k times</p> <p>C. Decreases 1/K times</p> <p>D. Remains unchanged</p>
16	Consider a spherical shell of metal at the centre of which a positive point charge is kept	<p>A. The electric field is zero outside the shell</p> <p>B. The electric field is zero everywhere</p> <p>C. The electric field is zero in the region inside the shell</p> <p>D. The electric field is non-zero in both regions outside and inside the shell</p>
17	The concept of field theory was put forward by	<p>A. Franklin</p> <p>B. Kepler</p> <p>C. Oersted</p> <p>D. Michael Faraday</p>
18	The resistance of 20 cm long wire is 10Ω . When the length is changed to 40 cm. The new resistance is	<p>A. 10Ω</p> <p>B. 20Ω</p> <p>C. 30Ω</p> <p>D. 40Ω</p>
19	The charge carriers in gases are	<p>A. electrons</p> <p>B. ions</p> <p>C. protons</p> <p>D. ions and electrons</p>
20	The relation between the charge Q of a parallel plate capacitor and the P.D between its plates is	<p>A. $Q=V/C$</p> <p>B. $Q=C/V$</p> <p>C. $Q=1/2CV$</p> <p>D. $Q=CV$</p>