

ECAT Pre General Science Physics Chapter 12 Electrostatics Online Test

Sr	Questions	Answers Choice
1	The nature of capacity of electrostatic capacitor depends on	A. Shape B. Size C. Thickness of plates D. Area
2	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
3	In case of a parallel plate capacitor if the plate separation is doubled and plate area is halved, the capacitance becomes	A. Four-fold B. One-half C. One-fourth D. Zero
4	The unit of intensity of electric field is	A. newton/coluomb B. jule/coluomb C. volt x metre D. newton/metre
5	What is the current is a 2 x 10^6 ohm resistor having a potential difference of 2 x 10^3 volts?	A. 10 ⁻¹ A B. 10 ⁻² A C. 10 ⁻⁴ A D. 1 mA
6	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
7	Two electric bulbs of 200 W and 100 W have same voltage. If $R_1 \text{and}\ R_2 \text{be}$ their resistance respectively then	A. R ₁ = 2R ₂ B. R ₂ = 2R ₁ C. R ₂ = 4R ₁ 1= 4R ₂
8	The electric intensity outside the two oppositely charged parallel metal plates is	A. Maximum B. Minimum C. Zero D. Infinite
9	The dot product of electric field intensity E and vector area A is called	A. Electric potential B. Electric flux C. Electric field D. Magnetic field
10	The value of electrical constant of proportionality k is	A. 9 x 10 ⁹ Nm ² C ⁻² B. 9 x 10 ⁻⁹ Nm ² C ⁻² C. 9 x 10 ¹⁰ Nm ² C ² C ⁻² C ^{Nm²C²C²C²C²C²C²C²C²C²C²D. 9.85 x 10⁻¹²N⁻¹C⁻²}
11	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
12	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
13	The capacity of a parallel plat capacitor depends on the	A. Type to metal used B. Thickness of plates C. Potential applied across the plates D. Separation between the plates
		A. 64 W

14	A 100 W, 200 V bulb is connected to a 160 volts supply. The actual power consumption would be	B. 80 W C. 100 W D. 125 W
15	If a charged spherical conductor of radius 10 cm has potential V at a point distance 5 cm from its centre, then the potential at a point distance 15 cm from the centre will be	A. 1/3 V B. 2/3 V C. 3/2 V D. 3V
16	In RC series circuit the time during which the capacitor acquires 0.63 times the equilibrium charge is called	A. Time constant B. Decay constant C. None of these D. All of above
17	Three resistance 500,500 and 50 ohms are connected in series across 555 volts mains. The current flowing through them will be	A. 0.52 A B. 1 mA C. 0.7 mA D. 1.4 A
18	An electric dipole is at the centre of a hollow sphere of radius r. The total normal electric flux through the sphere is (here Q is the charge and d is the distance between the two charges of the dipole)	A. Q/4 <i style='box-sizing: border-box; color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);'>π</i> > B. 2Q/4 <i style='box-sizing: border-box; color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 18px; background-color: rgb(255, 255, 248);'>π</i> i>r ² C. Q.d
19	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
20	The electric flux from a closed surface	A. Is independent of the shape of the surface B. Depends on the charge enclosed by the surface C. Both a and b D. None of the above