

ECAT Pre General Science Physics Chapter 12 Electrostatics Online Test

Sr	Questions	Answers Choice
1	Heating effect caused by an electric circuit is written	A. $H = I^2 R t$ B. $H = I^2 R$ C. $H = I R^2 t$ D. $H = I R^2$
2	Electric generators which convert mechanical energy into	A. solar energy B. thermal energy C. kinetic energy D. electrical energy
3	Solar cell converts sunlight directly into	A. potential energy B. thermal energy C. mechanical energy D. electrical energy
4	If a 40 watt light bulb burns for 2 hours. how much heat is generated	A. $288 \times 10^3 \text{ J}$ B. $288 \times 10^8 \text{ J}$ C. $288 \times 10^5 \text{ J}$ D. $288 \times 10^6 \text{ J}$
5	The potential difference across the conductors should be maintained constant by connecting the ends of wire to the terminal of a device called a source of	A. power B. current C. resistance D. temperature
6	The speed of randomly moving electrons depends upon	A. pressure B. volume C. temperature D. mass
7	The conventional current in a circuit is defined as " current which passes from a point at higher potential to a point at lower potential as if it represent a movement of	A. negative charges B. positive charges C. protons D. electrons
8	The charge carriers in gases are	A. electrons B. ions C. protons D. ions and electrons
9	The charge carriers in electrolyte are positive and negative	A. protons B. electrons C. ions D. none of these
10	The relation between charge 'Q' and current 'I' is given by	A. $Q = I/t$ B. $Q = I t$ C. $Q = I^2 t$ D. $Q = I^2/t$
11	Which of the following represents an electric current?	A. C^{-1} B. $C S^{-1}$ C. $J S^{-1}$ D. dynes^{-1}
12	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
13	One coulomb per second is equal to	A. One volt B. One ampere C. One ohm D. One henry
14	The charge per unit time through any cross-section of a conductor is called	A. capacitance B. electric power C. current D. potential difference
15	Free electrons are	A. tightly bound B. fixed C. loosely bound D. tightly fixed

16	The current through a metallic conductor is due to the motion of	A. protons B. neutrons C. electrons D. free electrons
17	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
18	Capacitance of two or more capacitors	A. Increases in series combination B. Increases in parallel combination C. Remains unchanged D. None of the above
19	The electric intensity at infinite distance from the point charge will be	A. Infinite B. Positive C. Zero D. Negative
20	The electric intensity outside the two oppositely charged parallel metal plates is	A. Maximum B. Minimum C. Zero D. Infinite
21	The energy stored in a charge capacitor	A. $\frac{1}{2}CV^2$ B. $\frac{1}{2}C^2V$ C. $\frac{1}{2}C/V^2$ D. None of these
22	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
23	The capacitance of a parallel plate capacitor depends upon	A. Area of the plates B. Separation between the plates C. Medium between the plates D. All of the above
24	Surface density of charge is defined as	A. Charge per unit volume B. Charge per unit length C. Charge per unit area D. Charge per unit mass
25	The SI unit of capacitance is	A. Farad B. Henry C. Ohm D. Volt
26	Electron volt is the unit of.	A. Potential difference B. Energy C. Resistance D. Capacitance
27	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. $Q=CV$
28	Electron volt is the unit of	A. Potential difference B. Energy C. Resistance D. Capacitance
29	If an electron of charge 'e' is accelerated through a potential difference V., it will acquire energy	A. Ve B. V/e C. e/V D. $2Ve$
30	One joule is equal to	A. $1.6 \times 10^{19} \text{ eV}$ B. $6.25 \times 10^{18} \text{ eV}$ C. $1.6 \times 10^{18} \text{ eV}$ D. $6.25 \times 10^{19} \text{ eV}$