

ECAT Physics Chapter 12 Electrostatics

| Sr | Questions | Answers Choice |
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| 1 | The electric potential at the surface of an atomic nucleus ($Z = 50$) of radius 9.0×10^{-15} is | A. 9×10^5 V B. 9 V C. 8×10^6 V D. 80 V |
| 2 | The minimum resistance that can be obtained by connecting 5 resistance of $\frac{1}{4}\Omega$ each is | A. $\frac{4}{5}\Omega$ B. $\frac{5}{4}\Omega$ C. 20Ω D. 0.05Ω |
| 3 | 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 |
| 4 | A car battery has e.m.f 12 volt and internal resistance 5×10^{-2} ohm. If it draws 60 ampere current, the terminal voltage of the battery will be | A. 5 volt B. 3 volt C. 15 volt D. 9 volt |
| 5 | Which of the following does not obey ohm's law? | A. Copper B. Al C. Diode D. None |
| 6 | 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 |
| 7 | 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 |
| 8 | If one volt is needed to cause a current of one ampere to flow in a conductor, its resistance is | A. one ohm B. one joule C. one volt D. one ampere |
| 9 | One joule is equal to | A. 1.6×10^{19} eV B. 6.25×10^{18} eV C. 1.6×10^{18} eV D. 6.25×10^{19} eV |
| 10 | Potentiometer is more sensitive than voltmeter, because | A. Voltmeter has a very high resistance B. Voltmeter has a very low resistance C. Potentiometer does not draw any current from a source of unknown potential difference D. Potentiometer is sensitive |
| 11 | Resistor is a device which convert electric energy to | A. Heat energy B. Chemical energy |

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| | | <p>C. Elastic energy D. All of the above</p> |
| 12 | A current of 1.6 A is passed through a solution of CuSO_4 . How many Cu^{2+} ions are liberated in one minute? | <p>A. 3×10^{20} B. 3×10^{10} C. 6×10^{20} D. 6×10^{10}</p> |
| 13 | Force acting upon a charged particle kept between the plates of a charged condenser is F. If one of the plates of the condenser is removed, force acting on the same will become | <p>A. Zero B. $F/2$ C. F D. $2F$</p> |
| 14 | If an electron of charge 'e' is accelerated through a potential difference V., it will acquire energy | <p>A. Ve B. V/e C. e/V D. $2Ve$</p> |
| 15 | The minimum charge on any object can not be less than | <p>A. $1.6 \times 10^{-19} \text{C}$ B. $3.2 \times 10^{-19} \text{C}$ C. 1.0 C D. $4.8 \times 10^{-19} \text{C}$</p> |
| 16 | 10^6 electrons are moving through a wire per second, the current developed is | <p>A. $1.6 \times 10^{-19} \text{A}$ B. 1 A C. $1.6 \times 10^{-15} \text{A}$ D. 10^6A</p> |
| 17 | Question Image | <p>A. $5 \mu\text{F}$ B. $10 \mu\text{F}$ C. $3 \mu\text{F}$ D. $6 \mu\text{F}$</p> |
| 18 | The relation between charge 'Q' and current 'I' is given by | <p>A. $Q = I/t$ B. $Q = It$ C. $Q = I^2/t$ D. $Q = I^2/t$</p> |
| 19 | 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) | <p>A. $\frac{Q}{4\pi r^2}$ B. $\frac{2Q}{4\pi r^2}$ C. Q.d D. Zero</p> |
| 20 | Electric potential of earth is taken to be zero because the earth is good | <p>A. Semiconductor B. Conductor C. Insulator D. Dielectric</p> |