

ECAT Physics Chapter 12 Electrostatics

| Sr | Questions | Answers Choice |
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| 1 | A proton is about 1840 times heavier than an electron. When it is accelerated by a potential difference of 1 KV, its kinetic energy will be | A. 1840 KeV B. 1/1840 KeV C. 1 KeV D. 920 KeV |
| 2 | Electron volt is the unit of | A. Potential difference B. Energy C. Resistance D. Capacitance |
| 3 | A wire is bent into a ring of radius R is given a charge q. The magnitude of the electrical field at the centre of the ring is | A. Two B. 1/2 C. Zero D. 3/2 |
| 4 | The resistance of an incandescent lamp is | A. Smaller when switched on B. Greater when switched off C. The same whether it is switch off or switch on D. Greater when switched on |
| 5 | 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 |
| 6 | Ohm established a relation between | A. voltage and resistance B. voltage and charge C. voltage and current D. voltage resistance and charge |
| 7 | 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} |
| 8 | If the distance between the plates of a parallel plate condenser of capacity $10\mu\text{F}$ is doubled then new capacity will be | A. $5\mu\text{F}$ B. $20\mu\text{F}$ C. $10\mu\text{F}$ D. $15\mu\text{F}$ |
| 9 | The current through a metallic conductor is due to the motion of | A. protons B. neutrons C. electrons D. free electrons |
| 10 | The unit of intensity of electric field is | A. newton/coulomb B. jule/coulomb C. volt x metre D. newton/metre |
| 11 | Coulomb force, when any material medium is placed between two charges | A. Increases B. Decreases C. Remain unchanged D. None of these |

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| 12 | Two conductors having the same type of charges are connected by a conducting wire. There would not be any amount of charges on them if | <p>A. They have the same potential</p> <p>B. They have the same amount of charge</p> <p>C. They have the same capacity</p> <p>D. They have the same shape</p> |
| 13 | One electron volt is equal to | <p>A. $1.6 \times 10^{19} \text{eV}$</p> <p>B. $6.25 \times 10^{18} \text{eV}$</p> <p>C. $1.6 \times 10^{18} \text{eV}$</p> <p>D. $6.25 \times 10^{19} \text{eV}$</p> |
| 14 | An electron of charge e coulomb passes through a potential difference of V volts its energy in joules will be | <p>A. V/e</p> <p>B. eV</p> <p>C. e/V</p> <p>D. V</p> |
| 15 | The SI unit of conductivity is | <p>A. ohm-m</p> <p>B. ohm^{-1}</p> <p>C. ohm-m^{-1}</p> <p>D. ohm^{-1}m</p> |
| 16 | Taking the earth to be a spherical conductor of diameter $12.8 \times 10^3 \text{km}$. Its capacity will be | <p>A. $711 \mu\text{F}$</p> <p>B. $611 \mu\text{F}$</p> <p>C. $811 \mu\text{F}$</p> <p>D. $511 \mu\text{F}$</p> |
| 17 | Some charge is being given to a conductor. Then its potential | <p>A. Is maximum at surface</p> <p>B. Is maximum at centre</p> <p>C. Is remain same throughout the conductor</p> <p>D. Is maximum somewhere between surface and centre</p> |
| 18 | The ohm's is defined as | <p>A. 1 ampere / 1 volts</p> <p>B. 1 coulomb / 1 volt</p> <p>C. 1 volt / 1 ampere</p> <p>D. 1 volt / 1 coulomb</p> |
| 19 | If a 40 watt light bulb burns for 2 hours. how much heat is generated | <p>A. $288 \times 10^3 \text{J}$</p> <p>B. $288 \times 10^8 \text{J}$</p> <p>C. $288 \times 10^5 \text{J}$</p> <p>D. $288 \times 10^6 \text{J}$</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</p> <p>B. 10 watt</p> <p>C. 20 watt</p> <p>D. 60 watt</p> |