

ECAT Pre General Science Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	The electric lines of force are	A. Imaginary B. Physically existing everywhere C. Physically existing near the charge D. All of the above
2	A (100 W , 200 W) bulb is connected to a 160 V power supply. The power consumption would be	A. 64 W B. 80 W C. 100 W D. 125 W
3	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
4	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
5	A one microfarad capacitor of a TV is subjected to 4000 V potential difference. The energy stored in capacitor is	A. 8 J B. 16 J C. 4×10^{-3} J D. 2×10^{-3} J
6	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
7	Thermocouple is an arrangement of two different metals	A. To convert heat energy in to electrical energy B. To produce more heat C. To convert heat energy into chemical energy D. To convert electric energy in to heat energy
8	Specific resistance of a wire depends upon	A. Length B. Cross-section area C. Mass D. None
9	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
10	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
11	Calculate the amount of charge flowing in 2 minutes in a wire of resistance 10Ω when a	A. 120 C B. 240 C C. 360 C D. 480 C

	potential difference of 20 V is applied between its ends	C. 20 C D. 4 C
12	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. $Q=CV$
13	Heating effect caused by an electric circuit is written	A. $H = I^2 R t$ B. $H = I^2 R$ C. $H = IR^2 t$ D. $H = IR^2$
14	Which one of the following is the unit of electric field intensity	A. JC^{-1} B. Vm^{-1} C. Cm^{-1} D. CJ^{-1}
15	If the distance between the plates of a parallel plate condenser of capacity $10\mu F$ is doubled then new capacity will be	A. $5\mu F$ B. $20\mu F$ C. $10\mu F$ D. $15\mu F$
16	If 2.2 kilowatt power is transmitted through 1 10 ohm line at 22000 volt, the power loss in the form of heat will be	A. 0.1 watt B. 1 watt C. 10 watt D. 100 watt
17	In a building, there are 15 bulbs of 40 watts, 5 bulbs of 100 watts, 5 fans of 80 watts and a heater of 1 kilowatt. The voltage of the electric main is 220 volts. The minimum efficiency of the main fuse of the building will be	A. 0.4 A B. 11.4 A C. 9.8 A D. 10.6 A
18	The SI unit of permittivity is	A. $Nm^2 C^{-2}$ B. $N^{-1} m^{-2} C^{-2}$ C. NmC^2 D. $Nm^2 C^{-1}$
19	The current through a metallic conductor is due to the motion of	A. protons B. neutrons C. electrons D. free electrons
20	Electron volt is the unit of	A. Potential difference B. Energy C. Resistance D. Capacitance