

Physics ECAT Pre Engineering Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
2	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
3	The unit of resistance is	A. volt B. ampere C. ohm D. coat
4	Calculate the amount of charge flowing in 2 minutes in a wire of resistance 10 Ω when a potential difference of 20 V is applied between its ends	A. 120 C B. 240 C C. 20 C D. 4 C
5	A 60 W bulb operates on 220 V supply. The current flowing through the bulb is	A. 11/3 A B. 3 A C. 3/11 A D. 6
6	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
7	The SI unit of electric flux is	A. Weber B. Nm ² C ⁻¹ C. NmC ⁻¹ D. Nm ⁻² C
8	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
9	One coulomb of charge is created by	A. 10 electrons B. 1.6 x 10 ⁻¹⁹ electrons C. 6.25 x 10 ¹⁸ electrons D. 6.25 x 10 ²¹ electrons
10	If a 40 watt light bulb burns for 2 hours. how much heat is generated	A. 288 x 10 ³ J B. 288 x 10 ⁸ J C. 288 x 10 ⁵ J D. 288 x 10 ⁵ J
11	A piece of fuse wire melts when a current of 15 ampere flows through it. With this current. If it dissipates 22.5 W, the resistance of fuse wire will be	A. Zero B. 10 $<$lspan> C. 1 $<$lspan> D. 0.10 $<$lspan>
12	A conducting wire is drawn to double its length. Final resistivity of the material will be	A. Double of the original oneB. Half of the original oneC. One fourth of the original oneD. Same as original one

13	A capacitor is charged with a battery and then it is disconnected. A slab of dielectric is now inserted between the plates, then	A. I he 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
14	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> > C. Q.d D. Zero
15	The colour sequence in a carbon resistor in red, brown, orange and silver. The resistance of the resistor is	A. 21 x 10 ³ <u>+</u> 10% B. 23 x 10 ¹ <u>+</u> 10% C. 21 x 10 ³ <u>+</u> 5% D. 12 x 10 ³ <u>+</u> >5%
16	In bringing an electron towards another electron, electrostatic potential energy of system	A. Decreases B. Increases C. Remains uncharged D. Becomes zero
17	Which of the following does not obey ohm's law?	A. Copper B. Al C. Diode D. None
18	A certain charge liberates 0.8 g of oxygen. The same charge will liberate. how many g of silver?	A. 108 g B. 10.8 g C. 0.8 g D. 108/0.8 g
19	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
20	A wire of radius r has resistance R. If it is stretched to a wire of r/2 radius, then the resistance becomes	A. 2R B. 4R C. 16R D. Zero