ECAT Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	The speed of randomly moving electrons depends upon	A. pressure B. volume C. temperature D. mass
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 colour sequence in a carbon resistor in red, brown, orange and silver. The resistance of the resistor is	A. 21 x 10³<u>+</u> 10% B. 23 x 10¹<u>+</u> 10% C. 21 x 10³<u>+</u> 5% D. 12 x 10³<u>+</u> 5%
4	Cause of heat production in a current carrying conductor is	A. Collisions of free electrons with one another B. High drift speed of free electrons C. Collisions of free electrons with atoms or ions of conductor D. High resistance value
5	Two point charges A and B separated by a distance R attract each other with a force of 12 x 10^{-3}N. The force between A and B when the charges on them are doubled and distance is halved	A. 1.92 N B. 19.2 N C. 12 N D. 0.192 N
6	The electric field intensity at a point due to a point charge	A. Falls off inversely as the distance B. Falls off inversely as the square of distance C. Remains unchanged with distance D. Increase directly as square of distance
7	The fractional change in resistance per kelvin is known as	A. temperature coefficient B. resistance coefficient C. super temperature D. critical temperature
8	If the resistance of 2 ohm and 4 ohm are connected in parallel, the equivalent resistance will be	A. 6 ohm B. 4 ohm C. zero ohm D. 1.33 ohm
9	A cube of metal is given a positive charge Q. For the above system, which of the following statements is true?	A. Electric potential at the surface of the cube is zero B. Electric potential within the cube is zero C. Electric filed is normal to the surface of the cube D. Electric filed varies within the cube
10	Electron volt is the unit of	A. Potential difference B. Energy C. Resistance D. Capacitance
11	At any point on the right bisector of the line joining two equal and opposite charges	A. At electric field is zero B. The electric potential is zero C. The electric potential decreases with increasing distance from the centre D. The electric field is perpendicular to the line joining the charges
12	In a voltmeter the conduction takes place due to	A. Electrons only B. Holes only C. Electrons and holes D. Electrons and ions
		A. V/e

13	An electron of charge e coulomb passes through a potential difference of V volts its energy in joules will be	B. eV C. e/V D. V
14	The resistance of a conductor does not depend on its	A. mass B. resistivity C. length D. cross-sectional area
15	For two resistance wires joined in parallel, the resultant resistance is 6/5 ohm. When one of the resistance wire breaks, the effective resistance becomes 2 ohm. The resistance of the broken wire is	A. 3/5 ohm B. 2 ohm C. 6/5 ohm D. 3 ohm
16	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
17	The charge per unit time through any cross-section of a conductor is called	A. capacitance B. electric power C. current D. potential difference
18	Which of the following represents an electric current?	A. C⁻¹ B. CS⁻¹ C. J.S⁻¹ D. dynes⁻¹
19	An alpha particle is accelerated through a potential difference of 10^6volt. Its kinetic energy will be	A. 1 MeV B. 2 MeV C. 4 MeV D. 8 MeV
20	The graphical representation of ohm's law is	A. hyperbola B. straight line C. ellipse D. parabola