ECAT Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	The SI unit of capacitance is	A. Farad B. Henry C. Ohm D. Volt
2	If the distance between the plates of a parallel plate condenser of capacity 10μF is doubled then new capacity will be	A. 5μF B. 20μF C. 10μF D. 15μF
3	The unit of resistivity is	A. ohm B. ohm-m² C. ohm-meter D. ohm-m⁻¹
4	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/4πr² B. 2Q/4πr² C. Q.d D. Zero
5	Heating effect caused by an electric circuit is written	A. H = I²Rt B. H = I²R C. H = IR²t D. H = IR²
6	A charge of 0.1 c accelerated through a potential difference of 1000V acquires kinetic energy	A. 200 J B. 100 J C. 1000 J D. 400 J
7	A metal plate of thickness half the separation between the capacitor plates of capacitance C is inserted. The new capacitance is	A. C B. C/2 C. Zero D. 2C
8	In case of a parallel plate capacitor if the plate separation is doubled and plate area is halved, the capacitance becomes	A. Four-fold B. One-half C. One-fourth D. Zero
9	The ohm's is defined as	A. 1 ampere / 1 volts B. 1 coulomb / 1 volt C. 1 volt / 1 ampere D. 1 volt / 1 coulomb
10	Electron volt is the unit of	A. Potential difference B. Energy C. Resistance D. Capacitance
	A 10 F capacitor is charged to a potential difference of 50 V and is connected	A. 10μF B. 20μF

11	to another uncharged capacitor in parallel. Now the common potential difference becomes 20 volt.The capacitance of second capacitor is	255, 224);">μF C. 30μF D. 15μF
12	Resistance of a conductor depends upon	A. the quantity of current passing through it B. the voltage applied between its end C. its dimensions, physical state and nature of its material D. all of the above
13	Force acting upon a charged particle kept between the plates of a charged condenser if F. IF one of the plates of the condenser is removed, force acting on the same will become	A. Zero B. F/2 C. F D. 2F
14	The current through a metallic conductor is due to the motion of	A. protons B. neutrons C. electrons D. free electrons
15	The fractional change in resistance per kelvin is known as	A. temperature coefficient B. resistance coefficient C. super temperature D. critical temperature
16	The value of electrical constant of proportionality k is	A. 9 x 10⁹Nm²C⁻² B. 9 x 10⁻⁹Nm²C⁻² C. 9 x 10¹⁰Nm²C² D. 9.85 x 10⁻¹²N⁻¹C⁻²
17	Electric generators which convert mechanical energy into	A. solar energy B. thermal energy C. kinetic energy D. electrical energy
18	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
19	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
20	The resistance of a conductor does not depend on its	A. mass B. resistivity C. length D. cross-sectional area