ECAT Physics Chapter 12 Electrostatics

Sr	Questions	Answers Choice
1	The SI unit of electric field intensity is	A. CN⁻¹ B. NC⁻¹or Vm⁻¹ C. JC⁻¹ D. AV⁻¹
2	Calculate the amount of charge flowing in 2 minutes in a wire of resistance 10Ωwhen a potential difference of 20 V is applied between its ends	A. 120 C B. 240 C C. 20 C D. 4 C
3	The resistance of the given conductor can be increased by	A. Increasing the area B. Changing resistivity C. Decreasing the length D. None of the above because change does not matter because in any case the volume remains the same
4	The liquid which conduct current is known as	A. heating effect B. chemical energy C. electrolyte D. ohm's law
5	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
6	Coulomb force, when any material medium is placed between two charges	A. Increases B. Decreases C. Remain unchanged D. None of these
7	The statement "the electric force of repulsion or attraction between two point charges is directly proportional to the product of the charges and inversely proportional to square of the distance between them" refer to	A. Coulomb's law B. Gauss's law C. Biot-Sarwat law D. Ampere's law
8	The speed of randomly moving electrons depends upon	A. pressure B. volume C. temperature D. mass
9	The electric field due to an infinite long thin wire at a distance R varies as	A. 1/R B. 1/R² C. R D. R²
10	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
11	Three resistors of resistance R each are combined in various ways. Which of the following cannot be obtained?	A. 3RΩ B. 2R/4Ω C. R/3Ω D. 2R/3<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-

		align: center; background-color: rgb(255, 255, 248);">Ω
12	If the distance of separation between two chares is increased, the electrical potential energy of the system will	A. Increase B. Decrease C. May increase or decrease D. Remain the same
13	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
14	Magnetic effect at a point caused due to flow a current depend upon the	A. Quantity of current B. Distance from current C. Both the quantity of current and distance from current element D. None of the all
15	If two bulbs one of 60 W and other of 100 W are connected in parallel, then which one of the following will flow more?	A. 60 W bulb B. 100 W bulb C. Both equally D. None of these
16	A capacitor of capacity 1μF is charged to 1 KV. The energy stored in J	A. 5 B. 0.5 C. 0.005 D. 50
17	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
18	Electric potential of earth is taken to be zero because the earth is good	A. Semiconductor B. Conductor C. Insulator D. Dielectric
19	The SI unit of electric flux is	A. Weber B. Nm²C⁻¹ C. NmC⁻¹ D. Nm⁻²C
20	A point charge Q is placed at the mid-point of a line joining two charges. 4q and q. if the net force on charge q is zero. then Q must be equal to	A. -q B. +q C. -2q D. +4q