ECAT Physics Online Test

Sr	Questions	Answers Choice
1	In a straight current carrying conductor, the direction of magnetic field can be found by	A. right hand rule B. left hand rule C. head to tall rule D. none of these
2	The direction of lines of force depends upon the direction of	A. voltage B. current C. charges D. none of these
3	The most suitable material for permanent magnet is	A. cobalt B. iron C. steel D. alaminium
4	The field around a moving charge is called	A. magnetic field B. conservative field C. non-conservative field D. none of these
5	The sources of magnetic field are	A. isolated magnetic poles B. charges at rest C. charges in motion D. none of these
6	Heating effect caused by an electric circuit is written	A. H = I²Rt B. H = I²R C. H = IR²t D. H = IR²
7	Electric generators which convert mechanical energy into	A. solar energy B. thermal energy C. kinetic energy D. electrical energy
8	Solar cell converts sunlight directly into	A. potential energy B. thermal energy C. mechanical energy D. electrical energy
9	If a 40 watt light bulb burns for 2 hours. how much heat is generated	A. 288 x 10³J B. 288 x 10⁸J C. 288 x 10⁵J D. 288 x 10⁶J
10	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
11	The speed of randomly moving electrons depends upon	A. pressure B. volume C. temperature D. mass
12	The conventional current in a circuit is defined as " current which passes from a point at higher potential to a point at lower potential as if it represent a movement of	A. negative charges B. positive charges C. protons D. electrons
13	The charge carriers in gases are	A. electrons B. ions C. protons D. ions and electrons
14	The charge carriers in electrolyte are positive and negative	A. protons B. electrons C. ions D. none of these
15	The relation between charge 'Q' and current 'I' is given by	A. Q = I/t B. Q = It C. Q = I²t D. Q = I²/t

16	Which of the following represents an electric current?	A. C⁻¹ B. CS⁻¹ C. J.S⁻¹ D. dynes⁻¹
17	The SI unit of current is	A. watt B. coulomb C. volt D. ampere
18	One coulomb per second is equal to	A. One volt B. One ampere C. One hom D. One henry
19	The charge per unit time through any cross-section of a conductor is called	A. capacitance B. electric power C. current D. potential difference
20	Free electrons are	A. tightly bound B. fixed C. loosely bound D. tightly fixed
21	The current through a metallic conductor is due to the motion of	A. protons B. neutrons C. electrons D. free electrons
22	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
23	Capacitance of two or more capacitors	A. Increases in series combination B. Increases in parallel combination C. Remains unchanged D. None of the above
24	The electric intensity at infinite distance from the point charge will be	A. Infinite B. Positive C. Zero D. Negative
25	The electric intensity outside the two oppositely charged parallel metal plates is	A. Maximum B. Minimum C. Zero D. Infinite
26	The energy stored in a charge capacitor	A. 1/2CV² B. 1/2C²V C. 1/2C/V² D. None of these
27	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
28	The capacitance of a parallel plate capacitor depends upon	A. Area of the plates B. Separation between the plates C. Medium between the plates D. All of the above
29	Surface density of charge is defined as	A. Charge per unit volume B. Charge per unit length C. Charge per unit area D. Charge per unit mass
30	The SI unit of capacitance is	A. Farad B. Henry C. Ohm D. Volt