ECAT Physics Online Test

Sr	Questions	Answers Choice
1	The force experienced by an electron projected in a magnetic field B with a velocity V is given by	A. F=e(V x B) B. F= -e(V x B) C. F= e(B x V) D. Both a and c
2	The force experienced by a single charge carrier moving with velocity 'v' i magnetic field of strength 'B' is given by	A. F =q(v/B) B. F=q²(v x B) C. F=q(v x B) D. F= vx B
3	When current passes through a solenoid coil, it behaves like a	A. loop B. circle C. bar magnet D. none of these
4	The strength of magnetic field around the current conductor is	A. Smaller near the conductor B. Greater near the conductor C. Greater at the large distance from the conductor D. Constant near and away from the conductor
5	The magnetic field outside the solenoid due to current is	A. strong B. zero C. weak D. uniform
6	Which one of the following relations is correct?	A. 1 Wb-m²= Nm⁻¹A⁻¹ B. 1 tesla = 104 gausses C. 1 Wb-m²= 1 tesla D. All of the above
7	The magnetic field in the middle of a solenoid due to current is	A. weak B. strong and uniform C. none-uniform D. zero
8	The SI unit of magnetic permeability is	A. WB A⁻¹m⁻¹ B. WB mA⁻¹ C. WB Am⁻¹ D. None of these
9	Tesla is the unit of	A. Magnetic induction or flux density B. Magnetic flux C. Self inductance D. None of these
10	The SI unit of flux density is.	A. Tesla B. Weber C. Gaun D. Weber/meter
11	The unit of flux density is also given by	A. Weber/m²or Wb . m⁻² B. Weber/mor Wb . m C. Weber/mor Wb . m⁻¹ D. Weber or Wb
12	The SI unit of flux density is	A. Newton/Amp-meter B. Newton-m/Ampere C. Newton-m/Amp² D. Newton-Amp/meter
13	The straight current carrying conductor experiences maximum force in a uniform magnetic field when it is placed	A. parallel to the field B. Perpendicular to the field C. At an angle of 45 to the field D. None of the above
14	The SI unit of magnetic flux is.	A. weber B. Nm⁻¹A⁻¹ C. tesla D. gauss

15	The total number of lines of magnetic induction pasing through a surface perpendicular to the magnetic field is called	A. magnetic flux B. magnetic flux density C. magnetic induction D. magnetic field intensity
16	The unit of magnetic flux is	A. Weber-m² B. Weber-m³ C. Henry D. Weber
17	Weber is a unit of	A. magnetic flux B. magnetic filed intensity C. magnetic induction D. magnetic flux density
18	Magnetic flux and flux density are related by	A. Flux density = flux x area B. Flux density = flux / area C. Flux density = flux - area D. None of these
19	The SI unit of magnetic flux is	A. NmA⁻² B. NmA⁻¹ C. NAm⁻¹ D. Nm²A⁻¹
20	If current through conductor is 1 A and length of conductor is 1m placed at right angle to the magnetic field, then the strength of magnetic field is	A. F = B² B. F = 0 C. F = B D. F = B/2
21	The force exerted on a conductor of length L, carrying current I when placed in a magnetic field B is given by	A. F=IB/L B. F= L x B/I C. F = IL x B D. F = IL . B
22	The SI unit of magnetic induction is	A. Gauses B. Tesla C. Weber D. Weber²
23	A relationship between Gauses of magnetic induction and Tesla(T) is given by	A. G 10⁻³T B. G = 10⁻²T C. G = 10⁻⁴T D. G = 10⁻¹T
24	A meter wire carraying a current of 2A is at right angle to the uniform magnetic field of 0.5 Weber/m^2The force on the wire is	A. 5N B. 4N C. 1.5N D. 6N
25	The SI unit of magnetic induction is tesla which is equal to	A. Newton/ampere-meter or N/A-m B. Newton/ampere²-meter or N/A²-m C. Newton/ampere²-meter² or N/A²-m² D. Newton/ampere²-meter²or N/A²-m²
26	The force acting as one meter length of the conductor placed at right angle to the magnetic field, when one A current is passing through it, defines the	A. magnetic flux B. magnetic induction C. magnetic field D. self inductance
27	Gauss(G) is smaller unit of magnetic induction which is related to tesla(T) as	A. IT = 10⁻⁴G B. IT = 10⁵G C. IT = 10³G D. IT = 10⁴G
28	The force acting on a charge moving in a magnetic field	A. is perpendicular to the both magnetic field and direction of motion B. is proportional to the magnetic of charges C. vanishes when the motion is directly opposite to the direction of field D. all of the above
29	'K' is the proportionality constant of force experienced by conductor. What is the value of 'K' in SI units?	A. 0 B. 1 C. 0.5 D. -1
30	A current carrying conductor is placed at right angle to the magnetic field. The magnetic force experienced by the conductor is	A. minimum B. maximum C. zero D. none of these