Physics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	Flurescent screen is a screen where visible spot	A. vanishes B. is made C. becomes small and large D. none of these
2	The CRO deflects the beam of electrons, when they passes through uniform	A. electric field B. gravitational field C. magnetic flax D. magnetic field
3	CRO deflects the beam of	A. proton B. a-particle C. electron D. neutron
4	(CRO) Cathode ray oscilloscope is a device used for high speed	A. velocity B. graph plotting C. time-velocity D. none of these
5	A magnetic force on an electron travelling with $10^{8}ms^{-1}$parallel to a field of strength 1 Wb $m^{-2}$is	A. Zero B. 10⁵m C. 10⁻¹⁰N D. 10⁸N
6	The magnetic force exerted on an electron moving with velocity 'v' at right angle to the magnetic field is given by	A. F=eVB B. F=e²V/B C. F=e/VB D. F=B²/ev
7	A charged particle moving at right angle to the magnetic field will experience	A. minimum force B. maximum force C. zero D. moderate force
8	When charged particle is projected perpendicular to a uniform magnetic field its trajectory is	A. circular B. elliptical C. cycloid D. straight line
9	Charge to mass ratio (e/m) of an electron is given by the relation	A. e/m = 2V/Br² B. e/m = 2V/B²r C. e/m = 2V/B²r² D. e/m = V/2B²r²
10	The e/m of an electron moving in a circular path in a magnetic field is equal to	A. V/Br B. V/B²r² C. V²/Br² D. V²/Br
11	Centripetal force for electron is given by	A. mv²/ r B. mv / r² C. mv²/ r D. mr²/ v
12	When an electron enters in a magnetic field right angle to its motion, the magnitude of its velocity will be	A. changed B. zero C. unchanged D. none of these
13	In the expression of force experienced by electron, the direction of both v and B are	A. parallel B. zero C. perpendicular D. none of them
14	If volume of wire is 'AL' and there are 'n' numbers of charge carriers per unit volume, then the total number of charge carriers are	A. n/AL B. Al/n C. nAL D. nA/L
15	Lorentz force is defined as	A. q(E + V x B) B. q(E x B + V) C. q(E x V + B)

		D. q(E x B)
16	The force experienced by charged particle is maximum, if it moves	A. parallel to magnetic field B. perpendicular to magnetic field C. opposite to the magnetic field D. none of these
17	41 The force experience, when proton projected in a magnetic field with velocity 'v' is	A. +e(v x B) B. -C(V x B) C. +e²(v x B) D. -e(v²x B)
18	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
19	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
20	When current passes through a solenoid coil, it behaves like a	A. loop B. circle C. bar magnet D. none of these
21	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
22	The magnetic field outside the solenoid due to current is	A. strong B. zero C. weak D. uniform
23	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
24	The magnetic field in the middle of a solenoid due to current is	A. weak B. strong and uniform C. none-uniform D. zero
25	The SI unit of magnetic permeability is	A. WB A⁻¹m⁻¹ B. WB mA⁻¹ C. WB Am⁻¹ D. None of these
26	Tesla is the unit of	A. Magnetic induction or flux density B. Magnetic flux C. Self inductance D. None of these
27	The SI unit of flux density is.	A. Tesla B. Weber C. Gaun D. Weber/meter
28	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
29	The SI unit of flux density is	A. Newton/Amp-meter B. Newton-m/Ampere C. Newton-m/Amp² D. Newton-Amp/meter
30	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