

ECAT Physics Chapter 14 Electromagnetism

Sr	Questions	Answers Choice
1	When an electron enters in a magnetic field right angle to its motion, the magnitude of its velocity will be	<p>A. changed</p> <p>B. zero</p> <p>C. unchanged</p> <p>D. none of these</p>
2	41 The force experience, when proton projected in a magnetic field with velocity 'v' is	<p>A. $+e(v \times B)$</p> <p>B. $-C(V \times B)$</p> <p>C. $+e\langle\sup>2\langle\sup>(v \times B)$</p> <p>D. $-e\langle\sup>2\langle\sup>x B)$</p>
3	The force acting on a charge moving in a magnetic field	<p>A. is perpendicular to the both magnetic field and direction of motion</p> <p>B. is proportional to the magnetic of charges</p> <p>C. vanishes when the motion is directly opposite to the direction of field</p> <p>D. all of the above</p>
4	Strength of magnetic field is measured in SI units, in:	<p>A. N</p> <p>B. N/Am</p> <p>C. Am/N</p> <p>D. Nm/A</p> <p>E. None of these</p>
5	It is customary represent a current flowing towards the reader by a symbol	<p>A. (x)</p> <p>B. (+)</p> <p>C. (.)</p> <p>D. (-)</p> <p>E. (<o:p></o:p></p>)</p>
6	When some compass needles are placed on a card board along a circle with the center at the wire, they will	<p>A. Point the direction of N-S<o:p></o:p></p></p> <p>B. Set themselves tangential to the circle<o:p></o:p></p></p> <p>C. Point in the direction of E-W<o:p></o:p></p></p> <p>D. None of these<o:p></o:p></p></p> <p>E. Point in direction of S-E</p>
		<p>A. A magnetic field is setup</p></p>

7	In the region surrounding a current carrying wire:	<p>B. The lines of force are elliptical</p> <p>C. Direction of lines of forces depends upon direction of current</p> <p>D. Both (A) and (C)</p> <p>E. All of these</p>
8	Current is measured in	<p>A. volts</p> <p>B. watt</p> <p>C. ohm</p> <p>D. ampere</p>
9	Fluorescent screen is a screen where visible spot	<p>A. vanishes</p> <p>B. is made</p> <p>C. becomes small and large</p> <p>D. none of these</p>
10	A magnetic force on an electron travelling with 10^8ms^{-1} parallel to a field of strength 1 Wb m^{-2} is	<p>A. Zero</p> <p>B. 10^5 m</p> <p>C. 10^{-10} N</p> <p>D. 10^8 N</p>
11	The magnetic field outside the solenoid due to current is	<p>A. strong</p> <p>B. zero</p> <p>C. weak</p> <p>D. uniform</p>
12	The permeability of free space is measured in:	<p>A. Wb/Am</p> <p>B. Wb A/m</p> <p>C. Am/Wb</p> <p>D. m/Weber A</p> <p>E. None of these</p>
13	The force experienced by an electron projected in a magnetic field B with a velocity V is given by	<p>A. $F = e(V \times B)$</p> <p>B. $F = -e(V \times B)$</p> <p>C. $F = e(B \times V)$</p> <p>D. Both a and c</p>
14	Magnetic flux passing through the an element of area A placed perpendicular to a uniform magnetic field B is:	<p>A. Maximum</p> <p>B. Minimum</p> <p>C. Zero</p> <p>D. Very small</p> <p>E. None of these</p>
15	The SI unit of magnetic induction is tesla which is equal to	<p>A. $\text{Newton/ampere-meter or N/A-m}$</p> <p>B. $\text{Newton/ampere}^2\text{-meter or N/A}^2\text{-m}$</p> <p>C. $\text{Newton/ampere}^2\text{-meter}^2\text{ or N/A}^2\text{-m}^2$</p> <p>D. $\text{Newton/ampere}^2\text{-meter}^2\text{ or N/A}^2\text{-m}^2$</p>
16	The SI unit of magnetic flux is.	<p>A. weber</p> <p>B. $\text{Nm}^{-1}\text{A}^{-1}$</p> <p>C. tesla</p> <p>D. gauss</p>
17	A current carrying conductor is placed at right angle to the magnetic field. The magnetic force experienced by the conductor is	<p>A. minimum</p> <p>B. maximum</p> <p>C. zero</p> <p>D. none of these</p>
18	A long wire wound tightly on a cylindrical core is called:	<p>A. Potentiometer</p> <p>B. Solenoid</p> <p>C. Toroid</p> <p>D. Wheat and stone bridge</p> <p>E. None of these</p>

A. Thumb^2

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Hold the solenoid in the right hand with fingers curling in the direction of current. The direction of the field will be given by:

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B. <p class="MsoNormal" style="text-align:justify">Curled fingers</p>

C. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New

Roman","serif"">Middle finger</p>

D. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:"Times New

Roman","serif"">Arm of right hand</p>

E. <p class="MsoNormal" style="text-align:justify">None of these</p>

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A beam of electrons is provided by an

A. electron gun

B. Suppray

C. Injection

D. None of these