

ECAT Physics Chapter 14 Electromagnetism

Sr	Questions	Answers Choice
1	The total number of lines of magnetic induction passing through a surface perpendicular to the magnetic field is called	A. magnetic flux B. magnetic flux density C. magnetic induction D. magnetic field intensity
2	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
3	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
4	A long wire wound tightly on a cylindrical core is called:	A. Potentiometer B. Solenoid C. Toroid D. Wheat and stone bridge E. None of these
5	The unit of magnetic flux is	A. Weber-m ² B. Weber-m ³ C. Henry D. Weber
6	The sources of magnetic field are	A. isolated magnetic poles B. charges at rest C. charges in motion D. none of these
7	The SI unit of magnetic permeability is	A. $\text{WB A}^{-1}\text{m}^{-1}$ B. WB mA^{-1} C. WB Am^{-1} D. None of these
8	It is customary represent a current flowing towards the reader by a symbol	A. (x) B. (+) C. (.) D. (-) E. (>+)
9	$F = I(L \times B)$ is a	A. vector B. scalar C. unit vector D. none of these
10	The magnetic field in the middle of a solenoid due to current is	A. weak B. strong and uniform C. none-uniform D. zero
11	The SI unit of magnetic induction is	A. Gauss B. Tesla C. Weber D. Weber^2
12	The force experience, when proton projected in a magnetic field with velocity 'v' is	A. $+e(v \times B)$ B. $-C(V \times B)$ C. $+e^2(v \times B)$ D. $-e^2(v \times B)$
13	In a straight current carrying conductor. the direction of magnetic field can be found by	A. right hand rule B. left hand rule

		<p>C. head to tail rule</p> <p>D. none of these</p>
14	The strength of magnetic field around the current conductor is	<p>A. Smaller near the conductor</p> <p>B. Greater near the conductor</p> <p>C. Greater at the large distance from the conductor</p> <p>D. Constant near and away from the conductor</p>
15	In the region surrounding a current carrying wire:	<p>A. A magnetic field is setup</p> <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>
16	Magnetic flux passing through a element whose vector area makes an angle θ with lines of magnetic force is:	<p>A. $BA \cos \theta$</p> <p>B. Zero</p> <p>C. BA</p> <p>D. $BA \sin \theta$</p> <p>E. None of these</p>
17	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>
18	How many number of anodes used in electron gun	<p>A. one</p> <p>B. two</p> <p>C. three</p> <p>D. six</p>
19	The force experienced by charged particle is maximum, if it moves	<p>A. parallel to magnetic field</p> <p>B. perpendicular to magnetic field</p> <p>C. opposite to the magnetic field</p> <p>D. none of these</p>
		<p>A. Point the direction of N-S</p> <p>B. Set</p>

When some compass needles are placed on a card board along a circle with the center at the wire, they will

themselves tangential to the circle

C. Point in the direction of E-W

D. None of these

E. Point in direction of S-E