

MDCAT Physics Chapter 11 Electromagnetism MCQ's Test

Sr	Questions	Answers Choice
1	If an electron vertically downwards, then the horizontal component of the earth's magnetic field will deflect it to wards	A. West B. East C. North D. North
2	A positively charged particle is moving perpendicular to a uniform magnetic field. The magnetic force makes the particle to move along:	A. An elliptical path B. A circular path C. A parabolic path D. None of these
3	A source of a magnetic field is:	A. An isolated magnetic B. A static electric charge C. A moving electric charge D. None of these
4	An electron and a proton are projected at right angles to a uniform magnetic field with	A. the electron trajectory will be less curved than proton's trajectory B. the electron trajectory will be more curved than proton's trajectory C.) both trajectories will be equally curved D.) both particles continue to move along a straight line
5	The magnetic field produced due to the current in a straight wire is proportional to the :	A. Electric current B. Conducting material C. Length of the wire D. Diameter of the wire
6	A long solenoid has 20 turns/ cm. The current necessary to produce a magnetic field of 20 millitesla inside the solenoid is approximately:	A. 1A B. 2A C. 4A D. 8A
7	A straight current carrying conductor experiences maximum forces 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 these
8	Charge to mass ratio (e/m) of a charge particle is also called its:	A. Specific charge B. Specific Force C. Gyro-magnetic ratio D. Magneto-mechanical ratio
9	A magnetic field	A. Always exerts a force on a charged particle B. Never exerts a force on a charged particle C. Exerts a force on a charged particle if it is moving across the magnetic lines of force D. Exerts a force on a charged particle if it is moving along the magnetic lines of force.
10	The direction of force experienced by a moving in a magnetic field will be:	A. Parallel to the field B. Opposite to the field C. Parallel to its direction of motion D. Perpendicular to both the field and the velocity vector
11	Magnetic field inside a solenoid is:	A.) Directly proportional to current B. Inversely proportional to current C. Directly proportional to its length D. Inversely proportional to total no of turns
12	A tritium and alpha particle enter the magnetic field with same kinetic energy, what will be the ratio of their radii?	A. 3:4 B. $\sqrt{3}:1$ C. $\sqrt{3}:4$ D. $\sqrt{3}:\sqrt{2}$
13	The magnetic field of a solenoid is quite similar to that of a:	A. Straight conductor B. A horse shoe magnet C. Any magnet

14 The magnetic field due to the electric current in a conducting wire is:

- A. Towards the centre of the conducting wire
- B. Circular around the conducting wire
- C. In the direction of the electric current
- D. In the direction opposite to the electric current

15 Which one of the following particles projected perpendicular to a uniform magnetic field with the same velocity will be deflected least?

- A. Electron
- B. Proton
- C. Deuton
- D. None of these
