

## MDCAT Physics Chapter 11 Electromagnetism MCQ's Test

Sr	Questions	Answers Choice
1	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. $\sqrt{3}:\sqrt{2}$
2	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
3	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.
4	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
5	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
6	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
7	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
8	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
9	A straight current carrying conductor experiences maximum forces in a uniform magnetic field when it is placed:	A. Parallel to the field B. Perpendicular o the field C. At an angle of 45 to the field D. None of these
10	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
11	The magnetic field of a solenoid is quite similar to that of a:	A. Straight conductor B. A horse shoe magne C. Any magnet D. A bar magnet
12	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 lines

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- 13 A long solenoid has 20 turns/ cm. The current necessary to produce a magnetic field of 20 millites inside the solenoid is approximately:
- A. 1A
  - B. 2A
  - C. 4A
  - D. 8A
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- 14 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
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- 15 The magnetic field produced due to the current in a straight wire is proportionalto the :
- A. Electric current
  - B. Conducting material
  - C. Length of the wire
  - D. Diameter of the wire
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