# MDCAT Physics Chapter 11 Electromagnetism MCQ's Test

| Sr | Questions | Answers Choice |
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| 1 | The direction of force experienced by a moving in a magnetic field will be: | A. Parallel to the field<br>B. Opposite to the field<br>C. Parallel to its direction of motion<br>D. Perpendicular to both the field and the velocity vector |
| 2 | The magnetic field produced due to the current in a straight wire is proportionalto the : | A. Electric current<br>B. Conducting material<br>C. Length of the wire<br>D. Diameter of the wire |
| 3 | A tritium and alpha particle enter the magnetic field with same kinetic energy, what will be the ratio of their radii? | A. 3:4<br>B. √3: 1<br>C. √3: 4<br>D. √3:√2 |
| 4 | 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<br>B. A circular path<br>C. A parabolic path<br>D. None of these |
| 5 | Magnetic field inside a solenoid is: | A. ) Directly proportional to current<br>B. Inversely proportional to current<br>C. Directly proportional to its length<br>D. Inversely proportional to total no of turns |
| 6 | 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<br>B. the electron trajectory will be more curved than proton's trajectory<br>C. ) both trajectories will be equally curved<br>D. ) both particles continue to move along a straight lins |
| 7 | A long solenoid has 20 turns/ cm. The current necessary to produce a magnetic field of 20 mellites inside the solenoid is approximately: | A. 1A<br>B. 2A<br>C. 4A<br>D. 8A |
| 8 | The magnetic field of a solenoid is quite similar to that of a: | A. Straight conductor<br>B. A horse shoe magne<br>C. Any magnet<br>D. A bar magnet |
| 9 | A straight current carrying conductor experiences maximum forces in a uniform magnetic field when it is placed: | A. Parallel to the field<br>B. Perpendicular o the field<br>C. At an angle of 45 to the field<br>D. None of these |
| 10 | A magnetic field | A. Always exerts a force on a charged particle<br>B. Never exerts a force on a charged particle<br>C. Exerts a force on a charged particle if it is moving across the magnetic lines of force<br>D. Exerts a force on a charged particle if it is moving along the magnetic lines of force. |
| 11 | A source of a magnetic field is: | A. An isolated magnetic<br>B. A static electric charge<br>C. A moving electric charge<br>D. None of these |
| 12 | If an electron vertically downwards, then the horizontal component of the earth's magnetic field will deflect it to wards | A. West<br>B. East<br>C. North<br>D. North |
| | | A. Towards the centre of the conducting wire<br>B. Circular around the conducting |

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| 13 | The magnetic field due to the electric current in a conducting wire is: | wire<br>C. In the direction of the electric current<br>D. In the direction opposite to the electric current |
| 14 | Which one of the following particles projected perpendicular to a uniform magnetic field with the same velocity will be deflected least? | A. Electron<br>B. Proton<br>C. Deuton<br>D. None of these |
| 15 | Charge to mass ratio (e/m) of a charge particle is also called its: | A. Specific charge<br>B. Specific Force<br>C. Gyro-magnetic ratio<br>D. Magneto-mechanical ratio |