



Class 12 Physics | Magnetism And Matter

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. Magnetic field lines of a bar magnet:

- A. Never enter the magnet
- B. Intersect outside the magnet
- C. Start and end at isolated magnetic charges
- D. Form closed loops

2. An isolated magnetic north pole is:

- A. Always present at Earth's centre
- B. Obtained by cutting exactly at the centre
- C. Not obtained by cutting a bar magnet
- D. Obtained by heating any magnet

3. SI unit of magnetic dipole moment is:

- A. N/C B. $A\ m^2$ C. T/m D. A/m

4. A bar magnet in a uniform magnetic field has net force:

- A. Zero B. mB C. 2mB D. m/B

5. A magnetic dipole is in stable equilibrium when its moment is:

- A. Antiparallel to B B. Perpendicular to B
- C. Parallel to B D. At 45° to B

6. Its potential energy when antiparallel to B is:

- A. 0 B. +mB C. -mB D. -2mB

7. Torque on a magnetic dipole of $2\ A\ m^2$ perpendicular to $0.5\ T$ field is:

- A. $0.25\ N\ m$ B. 0 C. $4\ N\ m$ D. $1\ N\ m$

8. Far from a short bar magnet, axial field magnitude compared with equatorial field at equal r is:

- A. Four times B. Equal C. Half D. Twice

9. Diamagnetic materials are:

- A. Strongly attracted always
- B. Unaffected by all fields
- C. Weakly repelled by magnetic fields
- D. Permanent magnets always

10. Paramagnetic materials are:

- A. Weakly repelled
- B. Perfect magnetic shields
- C. Always permanent magnets
- D. Weakly attracted by magnetic fields

11. Ferromagnetic materials show:

- A. Only negative susceptibility
- B. No magnetic response
- C. No interaction among atomic moments
- D. Strong magnetisation due to domains

12. Which is diamagnetic?

- A. Bismuth B. Platinum C. Iron D. Aluminium

13. Which is ferromagnetic at room temperature?

- A. Bismuth B. Copper C. Water D. Iron

14. When a ferromagnet is heated above its Curie temperature, it becomes:

- A. Nonexistent
- B. Paramagnetic
- C. A magnetic monopole
- D. Perfect diamagnetic

15. Diamagnetic susceptibility is:

- A. Exactly one B. Small and negative
- C. Infinite D. Large and positive

ANSWER KEY — check after completing all 15 questions

1.D 2.C 3.B 4.A 5.C 6.B 7.D 8.D 9.C 10.D 11.D 12.A 13.D 14.B 15.B

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper