

# INTERNATIONAL INDIAN SCHOOL BURAIDAH

Worksheet for the Academic Year 2023-24

CLASS:12\_ SUBJECT: PHYSICS DATE:13-5-2023

LESSON :\_MAGNETISM AND MATTER

1. The permeability of a magnetic material is 0.9983. Name the type of magnetic materials it represents.
2. The susceptibility of a magnetic material is  $1.9 \times 10^{-5}$ . Name the type of magnetic materials it represents.
3. The susceptibility of a magnetic material is  $-4.2 \times 10^{-6}$ . Name the type of magnetic materials it represents.
4. Current flows through a circular loop. Depict the north and south pole of its equivalent magnetic dipole.
5. Which of the following substances are diamagnetic?
6. Is the steady electric current the only source of magnetic field? Justify your answer.
7. Relative permeability of a material,  $\mu_r = 0.5$ . Identify the nature of the magnetic material and write its relation to magnetic susceptibility.
8. Relative permeability of a material  $\mu_r = 400$ . Identify the nature of the magnetic material.
9. Relative permeability ( $\mu_r$ ) of a material has a value lying  $1 < \mu_r < 1 + \epsilon$  (where  $\epsilon$  is a small quantity). Identify the nature of the magnetic material.
10. In what way is the behaviour of a diamagnetic material different from that of a paramagnetic, when kept in an external magnetic field?