Magnetism and Matter

TRY YOURSELF

ANSWERS

1. Magnetic line of force are closed, continuous curves, but electric lines of force are discontinuous.

2. At the point of intersection, there will be two direction of magnetic field which is not possible.

3. The pole strength of each magnets will always be same *i.e.* 10 Am.

4. Magnetic poles always exist in unlike pairs of equal strength.

5. $\phi_B = \vec{B}.\overrightarrow{dA} = 0$, where ϕ_B is the magnetic flux, B is the magnitude of magnetic field and dA is the element of area of entering surface.

6. Molar susceptibility $= \dfrac{\text{Volume susceptibilty}}{\text{Density of material}} \times$ molecular weight

$$= \frac{I/H}{\delta} \times M = \frac{I/H}{M/V} \times M$$

So, SI unit for molar susceptibility is m^3.

7. It is ferromagnetic.

8. Ferromagnetic material has net magnetic moment.

9. The shock mis-aligns the domains. Heating will also decrease magnetism.

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