

Worksheet: Magnetism and Matter

IB · Class 12 · Physics · 5 questions · 12 marks

Name: _____

Date: _____

Score: _____ / 12

Q1. A bar magnet ($m = 2 \text{ A m}^2$) is at 30 degrees to a 0.5 T field. Find the torque. *[2 marks]*

Q2. At a place $B_H = 0.3 \text{ G}$ and dip = 60 degrees. Find the total field. *[2 marks]*

Q3. Why are soft magnetic materials used in transformer cores? *[2 marks]*

Q4. A paramagnet has susceptibility 3×10^{-4} at 300 K. Find it at 600 K. *[3 marks]*

Q5. A solenoid with $n = 500 \text{ turns/m}$, $I = 2 \text{ A}$ and an iron core ($\mu_r = 2000$). Find the magnetisation M . *[3 marks]*
