

Sample Calculations for Lab 06

You must show complete details here, including proper SI units.

A circular coil of 100 turns has a radius of 0.05 m and carries a current of 1.5 A.

(a) Calculate the magnetic moment of the coil, μ .

(b) If the coil is placed into an external field of magnitude 0.05 T, calculate the maximum torque on the current loop.

(c) Make a sketch showing the relevant vector directions for the maximum and minimum torque to occur.