Question 1 **(5 marks)**

A DC motor is attached to a 6.00 V supply, as shown in the diagram on the right. The square coil has a side length of 8.60 cm and contains 50 turns. The total resistance of the circuit is 3.00 Ω and it sits in a 3.70×10^{-3} T magnetic field.

(a) Which way will the coil rotate when observed from X? Circle your answer. (1 mark)

A. Clockwise

B. Anticlockwise.

(b) Calculate the magnitude of the initial torque on the coil in the position shown in the diagram. (4 marks)

Answer _____ N m