

Worksheet: Moving Charges and Magnetism

ISC · Class 12 · Physics · 5 questions · 13 marks

Name: _____

Date: _____

Score: _____ / 13

Q1. A long straight wire carries 5 A. Find B at 10 cm from the wire. *[2 marks]*

Q2. A solenoid has 1000 turns/m and carries 2 A. Find B inside. *[2 marks]*

Q3. A proton ($m = 1.67 \times 10^{-27}$ kg, $q = 1.6 \times 10^{-19}$ C) moves at 2×10^6 m/s perpendicular to a 0.5 T field. Find the radius. *[3 marks]*

Q4. A galvanometer ($G = 50$ ohm, full scale at 5 mA) is converted to a 5 A ammeter. Find the shunt. *[3 marks]*

Q5. Two parallel wires carry 3 A and 4 A in the same direction, 5 cm apart. Find force per unit length. *[3 marks]*
