

20 Force on a current – Part 2 —Answers

Answers

Work through these after trying the questions yourself.

20.1 $F = BIL$.

20.2 The magnetic flux density.

20.3 $F = BIL = 0.3 \times 2 \times 0.5 = 0.3 \text{ N}$.

20.4 The force.

20.5 The field.

20.6 No force. $F = BIL$ applies only when the wire is at right angles to the field; a wire lying along the field feels no force at all.

20.7 Current flows round a coil in a field. The two sides of the coil carry current in opposite directions, so by Fleming's rule they feel forces in opposite directions. This pair of forces turns the coil —the turning effect that drives the motor.