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 $F = BIL = 0.3 \times 2 \times 0.5 = 0.3$ 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.