
202: Principles of electrical science

Worksheet 10: Generation of an EMF

Answer guide

1. Calculate the induced EMF in a cable with an effective length of 0.25m, moving at a velocity of 5m/s through a magnetic field with a flux density of 1.6 teslas.

2 volts

2. The EMF in a conductor of effective length 0.25m moving at right angles through a magnetic field at a velocity of 5m/s is 1.375 volts. Calculate the magnetic flux density.

1.1 teslas

3. In the diagram below, label the meaning of the thumb, first finger and second finger to represent Fleming's right hand generator rule.

