

The motor effect recall questions

1. What happens when a current flows through a conducting wire? **A magnetic field is produced around the wire.**
2. What two things does the strength of the magnetic field produced depend on? **The size of the current through the wire and the distance from the wire.**
3. Sketch a solenoid. Draw the magnetic field pattern around this. **The same shape as a bar magnet.**
4. What can be placed inside the solenoid to increase the magnetic field strength? **An iron core.**
5. What shape is the magnetic field pattern around a straight wire? **Circular.**
6. Write down what the three fingers of Fleming's left-hand rule show. **Thumb = Thrust (direction of force); First finger = Field direction; seCond finger = Current direction**
7. What are two ways to increase the size of the force on the conductor? **The current size and the magnetic field strength.**
8. Find the magnetic flux density equation and problems.
9. What are the units of magnetic flux density? **Tesla, T.**

The motor effect application questions

1. What is the magnetic field inside a solenoid like?
2. What is an electromagnet?
3. Describe how an electric bell that uses an electromagnet works.
4. Draw and annotate diagrams to explain how an electric motor works.
5. Draw and annotate diagrams to explain how a moving coil loudspeaker works.
6. Draw and annotate diagrams to explain how headphones work.