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Worksheet: Magnetic Effects of Electric Current

1. The Earth itself acts like a giant:
2. Which of these is a temporary magnet?
3. Write two ways to induce current in a coil?
4. When a compass needle is placed exactly at the center of a current-carrying circular coil, it will align:
5. In the Right-Hand Thumb Rule, if the current flows upwards, the magnetic field lines will be in which direction?
6. The direction of the magnetic field lines around a straight current-carrying conductor can be found using the:
7. What is the role of a commutator in a DC motor?
8. What happens to a compass needle if you bring a strong electromagnet close to it with the current on?
9. The magnetic field lines never intersect each other because:
10. Which of these components is found in an electric motor?
11. A current-carrying straight conductor is placed in the east-west direction. What will be the direction of the force experienced by this conductor due to earth’s magnetic field? How will this force get affected?
12. List the properties of magnetic field lines.
13. Why are electromagnets preferred over permanent magnets in devices like magnetic separation machines?
14. Large cranes in junkyards use electromagnets to lift heavy objects because:
15. The magnetic effect of electric current was first observed by accident during experiments with:
16. What precaution should be taken to avoid the overloading of the domestic electric circuit?
17. Why does a compass needle get deflected when brought near a bar magnet?
18. An electric motor converts:
19. In Faradays experiment if instead of moving the magnet towards the coil we move the coil towards the magnet. Will there be any induced current? Justify your answer. Compare the two cases.
20. What happens to the magnetic field lines near the poles of a magnet?