



St. Lawrence High School
A Jesuit Christian Minority Institution



Term : Pre – Test

Work Sheet – 20

Class – X

Subject – Physical Science

Date – 22.06.20

Chapter – Current Electricity

Topic – Magnetic effect of current

Choose the correct option for the following questions.

1 × 15 = 15

- Magnetic effect of electric current was first proposed by scientist –
 - Ampere
 - Faraday
 - Coulomb
 - Oersted
- According to Oersted, a magnetic needle brought near a conducting wire will deflect, when –
 - There is no current in the wire
 - There is a flow of current in the wire
 - The current through the wire continuously changes the direction
 - None of these
- If a person is assumed to swim along the direction of current and faces a magnetic needle, then –
 - The N pole of the needle will deflect towards his right hand
 - The S pole of the needle will deflect towards his right hand
 - The S pole of the needle will deflect towards his left hand
 - None of these
- In the above problem, if the person faces the needle and this time swims along the opposite direction of flow of current, then –
 - The N pole of the needle will deflect towards his right hand
 - The N pole of the needle will deflect towards his left hand
 - The S pole of the needle will deflect towards his right hand
 - None of these
- According to thumb rule –
 - If the thumb of our any hand indicates the direction of current, then wrapped fingers will represent circular magnetic field around the current
 - If the thumb of our left hand indicates the direction of current, then wrapped fingers will represent circular magnetic field around the current
 - If the thumb of our left hand indicates the direction of magnetic field, then wrapped fingers will represent direction of the current
 - If the thumb of our right hand indicates the direction of current, then wrapped fingers will represent circular magnetic field around the current

6. Magnetic lines of force around a straight current carrying wire will be –
 - a. Straight and perpendicular to the wire
 - b. Straight and parallel to the wire
 - c. Circular and intersecting around the wire
 - d. Concentric circular around the wire

7. Magnetic lines of force circular coil will be –
 - a. Straight exactly at the centre of the coil
 - b. Straight everywhere inside the coil
 - c. Straight everywhere outside the coil
 - d. Intersecting inside the coil

8. Looking perpendicular on a loop from one side, the current is found to be clockwise, then –
 - a. N pole will be generated on that side of the coil
 - b. S pole will be generated on the opposite side of the coil
 - c. N pole will be generated on the opposite side of the coil
 - d. None of these

9. Looking perpendicular on a loop from one side, the current is found to be anti clockwise, then –
 - a. N pole will be generated on that side of the coil
 - b. S pole will be generated on that side of the coil
 - c. N pole will be generated on the opposite side of the coil
 - d. None of these

10. In Fleming's left hand rule, thumb of the left hand indicates –
 - a. Magnetic field
 - b. Direction of current
 - c. Deflection of magnetic needle
 - d. None of these.

11. If N pole of a magnetic needle is repelled by a circular loop, then the current at that face of the loop can be –
 - a. Clock wise only
 - b. Anti clockwise only
 - c. Both Clock wise or Anti clockwise
 - d. None of these

12. If S pole of a magnetic needle is attracted by a circular loop, then the current at that face of the loop can be –
 - a. Clock wise only
 - b. Anti clockwise only
 - c. Both Clock wise or Anti clockwise
 - d. None of these

13. The motion of a coil of a d.c. motor obeys, -
 - a. Ampere's swimming rule
 - b. Right hand thumb rule
 - c. Fleming's right hand rule
 - d. Fleming's left hand rule

14. Certain amount of current is flowing through a straight conducting wire and circular magnetic lines of force are generated around it. If now, keeping everything same, the wire is stretched to make its length double, then –
- Number of circular lines of force per unit length will increase
 - Number of circular lines of force per unit length will decrease
 - Number of circular lines of force per unit length will remain same
 - Nothing can be said
15. Electric motors work under the principle of –
- Electromagnetic induction
 - Fleming's right hand rule
 - Lenz's law
 - Conversion of electrical energy to mechanical energy

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