



St. Lawrence High School
A Jesuit Christian Minority Institution



Term : Test

Solution of Work Sheet – 2

Subject – Physical Science

Class – X

Date – 09.11.20

Chapter – Current Electricity

Topic – Magnetic effect of current

Choose the correct option for the following questions.

1 × 15 = 15

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

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

Ans: a. N pole will be generated on that side of the coil
- If N pole of a magnetic needle is repelled by a circular loop, then the current at that face of the loop can be –
 - Clock wise only
 - Anti clockwise only
 - Both Clock wise or Anti clockwise
 - None of these

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

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

Ans: Fleming's left hand rule
- Electric motors work under the principle of –
 - Electromagnetic induction
 - Fleming's right hand rule
 - Lenz's law
 - Conversion of electrical energy to mechanical energy

Ans: d. Conversion of electrical energy to mechanical energy

7. The armature of the motor experiences
- A net force and a net torque both
 - A net force but not a net torque
 - No net force but a net torque
 - Neither a force nor a torque
- Ans - c. No net force but a net torque**
8. The rotating speed of the armature of a motor can be increased by –
- Increasing current through it
 - By increasing the number of turns of armature coil
 - By increasing the pole strength of the magnets
 - All of above
- Ans – d. all of above**
9. In a dc motor, if we reverse the current, then
- Armature will rotate in opposite direction
 - Armature will stop rotating
 - There will be no change
 - After every half cycle the armature will change the direction of rotation
- Ans - a. Armature will rotate in opposite direction**
10. In Fleming's left hand rule, thumb indicates –
- Direction of current
 - Direction of magnetic field
 - Direction of force on conductor
 - All of the above
- Ans – c. Direction of force on conductor**
11. In Fleming's left hand rule, which finger indicates direction of magnetic field?
- Thumb
 - Fore finger
 - Middle finger
 - Any one of these
- Ans – b. Fore finger**
12. If a current carrying wire produces magnetic field, then can it attract or repel another current carrying wire?
- Yes
 - no
 - it may do so only if both are iron wires.
 - none of these
- ans – a. yes**
13. When can a copper wire be deflected by magnetic pole?
- When brought near the pole
 - Copper wire can never be deflected by magnet
 - When brought near the pole and it carries a current
 - none of these
- ans – c. When brought near the pole and it carries a current**
14. A current carrying loop produces –
- Only a S pole
 - Only an N pole
 - Both the poles on the either sides of it
 - None of these
- Ans – c. Both the poles on the either sides of it**

15. Which one of the following will behave as a short bar magnet?

- a. A very long straight current carrying wire
- b. A revolving electron
- c. A circular current carrying loop
- d. both b. and c.

ans - both b. and c.

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