



St. Lawrence High School  
A Jesuit Christian Minority Institution



Term : Test

Work Sheet – 3

Class – X

Subject – Physical Science

Date – 21.11.20

Chapter – Current Electricity

Topic – Electromagnetism

Choose the correct option for the following questions.

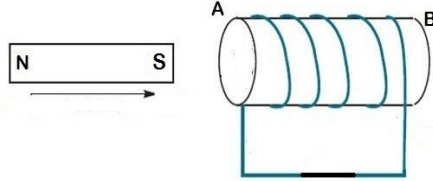
1 × 15 = 15

1. Generation of electricity was first proposed by scientist –
  - a. Oersted
  - b. Michael Faraday
  - c. Lenz
  - d. Coulomb
  
2. According to Faraday's law, a current will be generated –
  - a. When a magnetic flux link with a closed coil
  - b. When a magnetic flux link with a closed coil increases only
  - c. When a magnetic flux link with a closed coil decreases only
  - d. When a magnetic flux link with a closed coil changes with time
  
3. The induced emf in a coil is –
  - a. Directly proportional to the magnetic field
  - b. Directly proportional to the magnetic flux
  - c. Directly proportional to the rate of change of magnetic flux
  - d. All of the above
  
4. The direction of induced current will be such that –
  - a. It will try to oppose the cause of its generation
  - b. It will try to help the cause of its generation
  - c. It will be always in clockwise direction in any coil
  - d. It will be always in anti clockwise direction in any coil
  
5. An a.c. generator obeys –
  - a. Faraday's law
  - b. Lenz's law
  - c. Bothe the laws
  - d. None of these
  
6. In an a.c. generator, if the current induced in the coil for the first half cycle is anticlockwise, then –
  - a. current induced for the next half cycle is also anticlockwise
  - b. current induced for the next half cycle is clockwise
  - c. current induced for the next half cycle will be zero
  - d. None of these

7. Electric generator –
- Converts electrical energy to mechanical energy
  - Converts mechanical energy to electrical energy
  - Can only generate a.c current
  - None of these

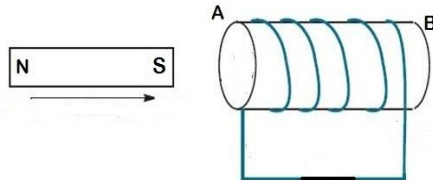
8. If the south pole of a bar magnet approaches a solenoid as shown in the figure, then the current in the coil near point A will be -

- Clockwise
- Anti Clockwise
- There will be no current
- Cannot be predicted



9. If the south pole of a bar magnet approaches a solenoid as shown in the figure, then which pole will be generated at the farthest end (at point B)?

- N pole
- S pole
- No pole will be generated
- Cannot be predicted



10. Split ring is used in –

- D.C. motor
- a.c. generator
- D.C. generator
- None of these

11. The necessity of split ring is –

- It changes the magnetic flux
- It alternates the direction of current
- It auto cut the circuit such a way that the induced current becomes unidirectional
- None of these

12. In household connection, all the appliances are connected always in –

- Series with the main supply
- Parallel with the main supply
- Mixed combination
- None of these

13. If different appliances are connected in series with the main supply, then –

- Potential drop across different appliances will be different
- Independent operation of one specific appliance is not possible
- The effective impedance will be large compared to parallel combination
- All of the above

14. In household connection, the switches are always connected with the –

- Live wire
- Neutral wire
- Earth wire
- Can be connected to any wire of the above

15. The left pin of a three pin socket is always connected to –
- a. Live wire
  - b. Neutral wire
  - c. Earth wire
  - d. None of these

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