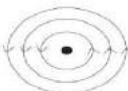# ELECTROMAGNETISM
1 Mark Questions

1.Define magnetic flux density or magnetic field induction

Ans: The magnetic flux passing through unit area taken perpendicular to the field is known as magnetic field induction (or) The ratio of magnetic flux passing through a plane perpendicular to the field and the area of the plane is called the magnetic flux density
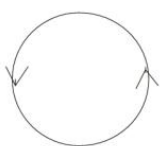
2. What is meant by a solenoid?

Ans: Solenoid is a long wire wound in a close packed helix

3. **See figure, magnetic lines are shown. In what direction does the current through wire flow?**

Ans: Out of the page

4. What is meant by an electromagnetism?

Ans: Electromagnetism is the branch of physics deals about magnetism produced by current carrying conductor

5. **The direction of current flowing in a coil as shown in the figure. What type of magnetic is formed at the face that has flow of current as shown in figure.**

Ans: N-Pole

6. What is right hand thumb rule?

Ans: When you curl your right hand fingers in the direction of current, thumb gives the direction of magnetic field

7. State Fleming's right hand rule

Ans: If the fore-finger points towards the direction of velocity of charge(current), middle finger points to the direction of filed then thumb gives direction of force when the three fingers are perpendicular to each others

8. State the Faraday's law

Ans: Whenever there is a continuous change of magnetic flux linked with a closed coil, a current is generated in the coil (OR) The induced EMF generated in a closed loop is equal to the rate of change of magnetic flux passing through it

9. State the Lenz's law

Ans: The induced current will appear in such a direction that it opposes the changes in the flux in the coil
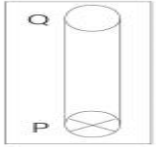
10. Define Magnetic flux. Write its units

Ans: Number of lines passing through the plane of area perpendicular to the field is called magnetic flux. SI unit is Weber
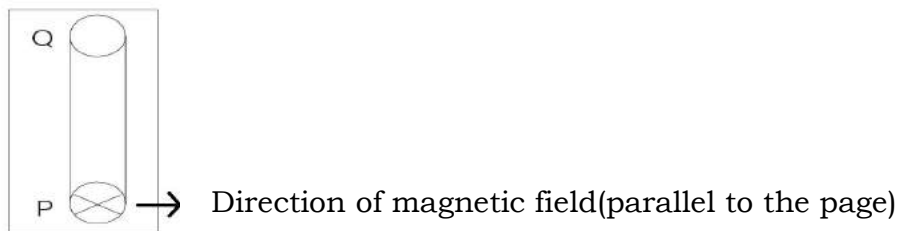
11. A bar magnet with north pole facing towards coil as shown in fig. What happens to magnetic flux passing through the coil?
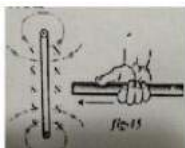
Ans:
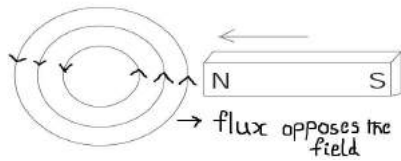
12. A coil is kept perpendicular to page At P, current flows into the page and at Q it comes out of the page as shown in figure. What is the direction of magnetic field due to coils?
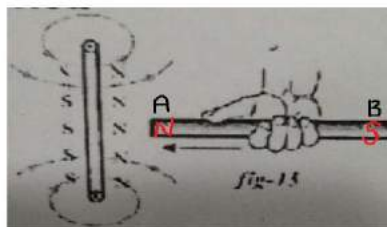
Ans:

Direction of magnetic field(parallel to the page)

13. The Following diagram shows Lenz 's law. Identify the magnetic poles at A and B sides

Ans:

14. Find the length of the conductor which is moving with a speed of 10m/s in the direction perpendicular to the direction of Magnetic field of induction 0.8T, if it induces an emf of 8v between the ends of the conductor.

Ans: ε=8v, B=0.8T, v=10 m/s

We know that $\varepsilon = Blv$

$l = \varepsilon/Bv = 8/0.8 \times 10 = 8/8 = 1$ m

15. State the rule which explains the direction of induced emf in a coil?

Ans: Fleming's right hand rule