



"ज्ञान, विज्ञान आणि सुसंस्कार यासाठी शिक्षण प्रसार"

शिक्षणमहर्षी- डॉ .साळुंखे बापूजी

**Shri Swami Vivekanand Shikshan Sanstha's
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DEPARTMENT OF PHYSICS

QUESTION BANK

B.Sc. Part-I, Semester-II, PHYSICS Paper- IV

DSC- 2B ELECTRICITY AND MAGNETISM-II

❖ Long answer questions.

1. State and explain Biot –Savarts law .obtain an expression for magnetic field at a point on the axis of current carrying circular coil.
2. Draw a circuit of Owen’s bridge and write its balancing condition.
3. Obtain an expression for magnetic field due to straight conductor of finite length carrying a current i .
4. Obtain an expression for magnetic field due to straight current carrying conductor.
5. State properties of paramagnetic and ferromagnetic materials.
6. State and explain Thevenin’s theorem
7. State and explain Norton’s theorem.
8. Explain construction and working of ballistic galvanometer.
9. What is damping in B.G? Explain how damping in B.G is corrected.
10. Obtain an expression for magnetic field at a point on the axis of current carrying circular coil.
11. Obtain an expression for magnetic field at a point on the axis of solenoid of finite length.

❖ Short answer type questions.

1. State the properties of diamagnetic material.
2. Explain the resonance in A.C. series LCR circuit.
3. Obtain an expression for magnetic field due to straight current carrying conductor.
4. State properties of paramagnetic and ferromagnetic materials.

5. Obtain an expression for magnetic field at a point on the axis of current carrying circular coil.
6. State properties of paramagnetic materials.
7. State properties of ferromagnetic materials
8. State and explain Biot –Savarts law
9. Give five comparison points between Paramagnetic and Diamagnetic materials?
10. Give construction of B.G
11. Explain damping in B.G
12. Explain divergence of magnetic field.
13. Explain curl of magnetic field.
14. Explain Magnetic vector potential
15. Distinguish between active and passive elements.