ANNAI VIOLET ARTS AND SCIENCE COLLEGE
DEPARTMENT OF PHYSICS

CONTINUOUS INTERNAL ASSESSMENT –I (ODD SEM.)
Subject: Electricity and Electromagnetism

Class : III B.Sc., Physics   **Max.Marks : 50**
Date : 01.09.2022-FN   **Sub. Code: SR25B**

PART A (5 × 2 = 10 Marks)
Answer any FIVE questions

1. Write the principle of superposition.
2. Define electric intensity.
3. State Gauss's law.
4. Define electrical image.
5. What is boundary conditions.
6. Mention the use of capacitors.
7. State Biot and Savart's law.

PART B – (2 × 5 = 10 Marks)
Answer any TWO questions

8. Write down the scope of the Coulombs law.
9. What is meant by polarisibility α? and Explain electronic polarisibility α_e
10. Explain the construction and theory of Helmholtz Galvanometer.

PART C – (3 × 10 = 30 Marks)
Answer ALL questions

11. Derive the multipole expansion of a charge distribution.
12. Verify the relation $\vec{D} = \varepsilon_0 \vec{E} + \vec{P}$
13. Derive the dielectrics and Gauss's law.