SCHOOL EDUCATION DEPARTMENT – VILLUPURAM DISTRICT

+2 PHYSICS – ASSIGNMENT QUESTIONS- DECEMBER

LESSON – 3,4

PART –I   **MARKS : 50**

I.ANSWER ALL THE QUESTIONS: **6 X 2 =12**

1. State Ampere's circuital law .

2. State Fleming's Left hand Rule.

3. What are the methods of increasing Current Sensitivity of a galvanometer.?

4. What are the methods of producing induced emf.?

5. How will you define I_{RMS} value of Alternating current.?

6. Define Q-factor.

II. ANSWER ALL THE QUESTIONS: **6 X 3 =18**

7. Write the properties of Magnetic field lines.

8. Explain the conversion of Galvanometer into an Ammeter.

9. Explain the conversion of Galvanometer into an Voltmeter.

10. Assuming that the length of the solenoid is large when compared to its diameter, derive an equation for its self inductance.

11. How will you induce an emf by changing the area enclosed by the coil.?

12. Explain the various energy losses in a transformer and its minimization.

III. ANSWER ALL THE QUESTIONS: **4 X 5 =20**

13. Obtain an expression for magnetic induction at a point due to an infinitely long straight conductor carrying current.

14. Derive an expression for Force acting on a current carrying conductor placed in magnetic field.

15. Explain the construction, working of a transformer. Define its efficiency.

16. Derive an expression for impedance of a series RLC circuit. Find phase angle between the applied voltage and current in a RLC circuit.