

1.1.2

**PHYL-322 – Lab course 6 ( D2) ; Electrical Properties and Superconductivity: Credits 3**

**Experiments based on Electrical Properties and Superconductivity**

1. Resistivity Measurement of a given sample by four probe method.
2. Characteristics of solar cell.
3. Measurement of dielectric constant and its variation with temperature.
4. Determination of bulk density of different materials using immersion technique.
5. Measurement of dielectric constant of liquids.
6. Measurement of electrical conductivity of Graphite at room temperature.
7. Determination of specific heat of Graphite at different temperatures.
8. Wind energy.
9. Measurement of dielectric constant of solids.
10. Porosity determination of Superconducting materials.
11. Determination of Bulk density of ferroelectric materials.
12. To measure ferroelectric hysteresis curves
13. Determination of Curie Temperature of Ferroelectrics.

**Note:** 1) Other experiments may be added as per the availability of instruments. 2) **Students should perform any eight experiments.**

**PHYR-331 : Research Project Part I (Experimental Work) : Credits 6**

Students are expected to do experimental work as per the formulation of topic of research project selected during 2<sup>nd</sup> semester

**PHYR-332 : Research Project Part V (Organization of Results) : Credits 3**

Students are expected to organize the results of experiments carried out