# ENGNEERING CHEMISTRY LAB
## (Only for CE during I B.Tech., I Semester)
## (Common to AE, ME during I B.Tech., II Semester)
## Course Code(s): CE1L1, ME2L1, AE2L1

**Credits:2**

**Lab: 3 periods/week**                    **Internal assessment: 25 marks**

**Semester end examination:  50 marks**

**COURSE OBJECTIVES**:

1. Students must familiar with quality and parameters of water samples, useful for drinking effluent treatment and agriculture purposes.
2. Students must awareness of preparation of some plastic material and corrosion kinetics useful in industries.
3. Students know about the measuring the properties of the lubricants which are industrially useful.

## Course Outcomes:

At  the end of this course , the students will be able to

1.Gain knowledge of  hardness , alkalinity, turbidity, Dissolved oxygen of
Water sample, students can understand different methods of water treatment.

2.Analyze  the nature of the soil from pH values the types of fertilizers and pesticides to be used cab be decided.

3.Apply the knowledge of  preparation of Bakelite in industries.

4.Assess the  Viscosity, flash and fire point saponification value and acid number of different lubricants , these parameters are useful in avoiding fire hazards in industries.

## LIST OF EXPERIMENTS

### ANY TEN OF THE FOLLOWING:

1. Determination of Total Hardness of water sample using EDTA.

2. Determination of Total alkalinity of water sample.

3. Determination of D.O in water.

4. Measurement of Turbidity of water sample.

5. Conduct metric titration of Acid Vs Base.

6. pH of Soil and fruits.

7. Preparation of Phenol-Formaldehyde resin.

8. Determination of Corrosion rate of mild steel in the absence and presence of an inhibitor.
9. Determination of Viscosity of heavy oil RED WOOD Viscometer.
10. Determination of Flash and Fire point of a Lubricating oil by Pen sky-martens apparatus.
11. Determination of Saponification value of Vegetable oil.
12. Determination of Acid number of a Lubricant oil.