

ENVIRONMENTAL ENGINEERING LAB

Course Code: 20CE1126

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Pre-requisites: Chemistry, Environmental Sanitation

Course Outcomes:

At the end of the course, the student will be able to:

CO1: Assess physical parameters of water as turbidity and colour (L2)

CO2: Determine the chemical characteristics as pH, TDS (L3)

CO3: Assess pollution characteristics of waste water by analyzing DO, BOD and COD (L2)

CO4: Assess the total hardness of given water sample (L2)

CO5: Calculate the amount of coagulant required for optimum sedimentation for a given turbid sample (L3)

(Any 12 out of 14 experiments)

LIST OF EXPERIMENTS:

1. Determination of pH and Turbidity.
2. Determination and Estimation of total solids, organic solids, dissolved solids, inorganic solids, determination of electrical conductivity.
3. Determination of Alkalinity/Acidity.
4. Determination of Optimum coagulant dose
5. Determination of Chlorides.
6. Determination of Chlorine demand.
7. Determination of Residual Chlorine
8. Determination of Dissolved Oxygen.
9. Determination of B.O.D
10. Determination of C.O.D
11. Determination of total Hardness.
12. Determination of Nitrogen.
13. Determination of Total Phosphates.
14. Determination of Sulphates.

Text Book:

1. American Public Health Association, "Standard Methods for Analysis of Water and Waste Water", APHA, Washington, 1992.

References:

1. National Environmental Engineering Research Institute, "Laboratory manual on water analysis", NEERI, Nagpur, India, 1987.
2. Sawyer and Mc Carty, "Chemistry for Environmental Engineering" McGraw-Hill, 1978.