



Dr. Bhimrao Ambedkar University Agra

Department of Environmental Studies
School of Life Sciences, Khandari Campus

Value Added Course

Course Name	Water Testing and Analysis
Course Code	Env.Sc-VAC-01
Duration	30 Hrs.
Course Coordinator	Prof. Bhupendra Swarup Shrama
Organized by	Department of Environmental Studies, School of Life Sciences, Khandari Campus, Agra
Credits	02
Evaluation	Done by the Coordinator

Course Description: Objective of this course is to determine the physical and chemical properties of water sample and to understand the basic concept of water testing and its analysis.

Syllabus

UNIT I

- 1) Understanding the Basic Aspect of Water Sampling.
- 2) Physical, Chemical and Biological Parameters of Water.
- 3) Different Methods of Sample Collection, Sample Holding and Preservation.
- 4) Water Sampling Equipment.

UNIT II

- 1) Determination of pH and Electrical Conductivity (EC).
- 2) Determination of Total Alkalinity and Acidity.
- 3) Determination of Turbidity, TDS, TS and TSS in water sample.
- 4) Determination of Hardness, Free CO₂ and Chloride in water sample.

UNIT III

- 1) Determination of Dissolved Oxygen.
- 2) Determination of Biochemical Oxygen Demand.
- 3) Determination of Chemical Oxygen Demand
- 4) Determination of Oil and Grease in waste water sample.

Suggested Readings: Environmental Biology - Mike Calver, Alan Lymbery, Jennifer McComb and Mike Bamford, Elements of Environmental Chemistry – J. Hussain, APHA, AWWA, WEF (1998). Standard Methods of water and waste water. APHA (20th Edition)

Course Outcome:

CO1: Student will be able to determine the quality of water sample.

CO2: Will have understanding about the chemical properties of waste water.

CO3: Will be able to understand about the oxygen demand of water.