

**Shivaji University, Kolhapur**  
**B. A. / B. A. B. Ed.**  
**SEC II: (Geography) as per NEP 2020**

Name of the Programme	B.A. Geography
Class	B.A. Part-III
Semester	VI
Name of Vertical Group	SEC
Course Code	SEC-II
Course Title	Water Analysis
Type of course	Theory and Practical
Total Credits	02
Workload	02 periods per week

**Preamble:**

The course "Water Analysis-II" offers students a comprehensive exploration of the fundamental concepts and principles of water analysis. This course aims to provide practical knowledge to the students an understanding of the methods of water analysis. In this course the students will studied the physical and chemical water analysis parameters. At the end of this course, students will have an experienced of key components of water analysis.

**Objectives of the Course:**

1. To identify and explain key water quality parameters.
2. To learn various quality indices useful for drinking and irrigation water analysis.
3. To train the students for the interpretation of water quality data with the comparison of regulatory standards.

**Outcomes:**

Course Outcome: By the end of this course, student will be able to:

CO 1 : The comprehensive understanding of various quality indices useful for assessment of water resources.

CO 2 : The selection and measure an appropriate water quality indices based on specific physical and chemical objectives.

CO 3 : Interpret the overall water qualities with a comparison of BIS and WHO standards.

**Nature of Question Paper:**

The student's examination and evaluation methods are as per the guidelines of the Shivaji University, Kolhapur.

## Modules

Module No.	Module Name	Sub-module	No. of hours	Credit
1	Physical Parameters of Water Analysis	1.1 Colour 1.2 Temperature 1.3 Odour and taste 1.4 Transparency 1.5 Turbidity 1.6 Conductivity	15	01
2.	Chemical Parameters of Water Analysis	2.1 pH 2.2 TDS 2.3 BOD 2.4 COD 2.5 Oil and Grease 2.6 Pesticides	15	01

### References:

1. Standard Methods for the Examination of Water and Wastewater - American Public Health Association, American Water Works Association, Water Environment Federation.
2. Water Quality Assessments: A Guide to the Use of Biota, Sediments and Water in Environmental Monitoring - Deborah V. Chapman (Editor).
3. Water Quality: Guidelines, Standards and Health - Lorna Fewtrell and Jamie Bartram.
4. Environmental Engineering: Water, Wastewater, Soil and Groundwater Treatment and Remediation - Nelson L. Nemerow and Franklin J. Agardy.
5. BIS 10500:2012 - Drinking Water Specification
6. BIS 2296:1982 - Specifications for Packaged Natural Mineral Water
7. BIS 3025:1983 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water
8. BIS 3589:2001 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water (Revision of IS 3025)
9. BIS 1622:2008 - Drinking Water - Specification
10. BIS 3025:1964 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water