

**DEPARTMENT OF CIVIL ENGINEERING,
RAJASTHAN TECHNICAL UNIVERSITY, KOTA
LECTURE PLAN ENVIRONMENTAL ENGG. I
III BE CIVIL ENGINEERING (V-SEMESTER)
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S.No.	Chapter Title	Lectures	Contents of the Lectures
1	General and Water Demand	1	Introduction
		2	Environment and its components, Importance of water
		3	Role of an Environmental Engineer, Historical overview
		4	Design flow, design periods, design population
		5	Various methods of population forecasting
		6	Types of water demand
		7	Factors affecting water consumption, variation in water demand
		8	Design capacities for various water supply components.
2	Sources of Water and Collection Works Quality of Water	9	Introduction
		10	Alternative sources i.e. Rain, surface and ground water
		11	Assessment of yield and development of the source
		12	The hydrological cycle
		13	Water quality, physical water quality parameters,
		14	Chemical water quality parameters,
		15	Biological water quality parameters,
3	Transmission or Water Preliminary Treatment of Water	16	Water quality requirements, Indian Standards.
		17	Hydraulics of conduits, pumps, pumps station
		18	Selection of pipe materials, pipe joints,
		19	Pumps, pumps station
		20	Historical overview of water treatment
		21	Aeration
		22	Solids separation, settling operations
		23	Coagulation
4	Advance Treatment of Water	24	Softening
		25	Filtration; slow sand filter
		26	Rapid sand filter
		27	Compariosn of filter
		28	Types of disinfectantdisinfectant
		29	Various forms of chlorination
		30	Dissolved solids removal
		31	Treatment plant design
5	Distribution of Water Plumbing of Building	32	Preparation of hydraulic profiles
		33	Method of distributing water, distribution reservoirs
		34	Distribution system components, capacity and pressure requirements
		35	Design of distribution systems
		36	Hydraulic analysis of distribution systems
		37	Pumping required for water supply system.
		38	Service connections
		39	Fixture units
40	Design of Plumbing systems		