



**BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE
(AUTONOMOUS)
DEPARTMENT OF CIVIL ENGINEERING**

Regulation	BR23				
III B. TECH II SEMESTER	Course Code: 23CE6E03	L	T	P	C
Course Title:	WATER SUPPLY SYSTEMS	3	0	0	3

Course Outcomes:

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

CO1: Outline of the various facets of water usage in daily life

CO2: Explain the origin of Natural waters and also to synthesize it for regular use

CO3: Discuss the utilization of non-potable water

CO4: Describe water supply system from a reservoir

CO5: Explain the characteristics of wastewater

UNIT-I

WATER AND LIFE:

Necessity of water – Domestic demand – Public demand – Irrigation – Transportation – Sanitation – Dilution of waste waters – Dust palliative – Recreation – Fire protection.

UNIT-II

SOURCES OF WATER:

Surface sources – Ground sources – Water from atmosphere – Desalination – Recycling of waste water – Recharging of aquifers.

UNIT-III

DUAL SUPPLY OF WATER:

Potable and non-potable water – Protected water – Grey water – Black water – Water borne diseases – water related diseases – Sewage Irrigation.

UNIT-IV

DISTRIBUTION OF WATER:

Based on topography – Gravity distribution – Direct pumping – Combined pumping and gravity flow. Service Reservoirs – Continuous supply – Intermittent supply – Networks of distribution– Emergency water supply as in case of fire accidents – Valves, hydrants and meters.

UNIT-V

INDUSTRIAL WATER

Location of Industry with reference to surface sources of water – Quality of water required for industrial operations – characteristics of waste water produced – Standards for letting industrial effluents into sources of water.

TEXT BOOKS:

1.K.N. Duggal, "Elements of Environmental Engineering", 7th Edition, S. Chand Publishers, 2010.

2.Hammer and Hammer "Water and wastewater Technology", 4th Edition, Prentice Hall of India, 2003.

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3. Howard S. Peavy, Donand P. Rowe, George Technobanoglous, "Environmental Engineering", 1st Edition Mc Graw –Hill Publications, Civil Engineering Series, 1985.

REFERENCES:

1. B.C. Punmia, "Water Supply Engineering", Vol. 1, "Waste water Engineering Vol. II", 2nd Edition, Ashok Jain & Arun Jain, Laxmi Publications Pvt.Ltd, New Delhi, 2008.
2. Fair, Geyer and Okun, "Water and Waste Water Engineering", 3rd Edition, Wiley, 2010.
3. Metcalf and Eddy, "Waste Water Engineering", 3rd Edition, Tata Mc Graw Hill, 2008.

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