



C.U.SHAH UNIVERSITY – Wadhwan City

FACULTY OF: -Technology and Engineering (Diploma Engineering)

DEPARTMENT OF: - Civil Engineering

SEMESTER: - V **CODE:** -2TE05WSE1

NAME –Water Supply and Sanitary Engineering

Teaching & Evaluation Scheme:-

Subject Code	Subject Name	Teaching Scheme (Hours)				Credits	Evaluation Scheme								
		Th	Tu	Pr	Total		Theory				Practical (Marks)				Total
							Sessional Exam		University Exam		Internal		University		
							Marks	Hours	Marks	Hours	Pr	TW	Pr	Tw	
2TE05WSE1	Water Supply and Sanitary Engineering	03	00	02	05	04	30	1.5	70	03	--	20	30	--	150

Objectives: Constructional management aspect of dams, highway, Bridges Railways.

Pre-requisite: Basic knowledge of various Construction Planning Scientific Management Organizations

Course Outlines:-

(A) Water Supply

Sr. No.	Course Contents	Teaching Hours
	(A) Water Supply	
1	Introduction : Importance and necessity, Sources of water, Suitability of water Choice of source	04
2	Quantity and Quality of Water: Types of demand, Population forecast Computation of quantity of water, Fluctuation in demand, Factors affecting demand, Impurities in water, Collection of water sample ,Physical Chemical and Biological tests, Standards of quality of water	06
3	Treatment of Water: Objects of water treatment, Location of treatment plant , Layout of treatment plant, Basic principles of working of treatment plant, Functioning of Coagulation treatment plant, Sedimentation, Filtration, Disinfection, Water Softening	08
4	Maintenance of Water Supply Means: Necessity, Methods of prevent leaks, Measures for conservation of water	04
	(B) SanitaryEngineering	
5	Sanitation System: Definitions, Objective of sewage disposal, Methods of sewage collection, Conservancy system, water carriage system	05
6	Drains and Sewers: Classification of Drains, Sewer section, Sewer joint Manholes, Flushing tank, Catch basin, Center line of sewer, Appurtenances and its locations, Hydraulic testing of sewer pipe, maintenance of sewer	07
7	Sewage Characteristics of sewage, Sampling of sewage, Natural processes of treatment of sewage, B.O.D. Test, Methods of sewage disposal	05

8	Recycling of Waste Water and Solid Waste Different method with respect to quality of waste water, Utilization and management of solid waste	06
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Term Work includes setting out of wastewater treatment plant to test of bod test, cod test, tds test ts test.

Learning outcomes: the student is knows about waste water treatment plant and sewage treatment plant are applied to test & experiments.

Books Recommended:-

1. 1 Test book of water supply & Sanitary Engg. S.K.Hussain Oxford & IBH
2. 2 Elements of Public Health Engineering K.N.Duggal S.Chand & Co.
3. 3 Water supply & Sanitary Engg. Vazirani & Chandola Khanna Publishers
4. 4 A Text book of water supply & Sanitary Engg. S.K.Garg Khanna Publishers
5. 5 Water supply & Sanitary Birdie G.S. Dhanpatrai & Sons
6. 6 A Text book of water supply engineering V.N. Gharpure Allied Book Stall, Baroda
7. 7 A Text book of sanitary engineering V.N. Gharpure Allied Book Stall, Baroda
8. 8 Water pollution & Disposal of Waste Water on Land U.N.Mahida Tata McGraw Hill
9. 9 Municipal and Rular Sanitation Ehlers & Steel Mc Graw hill book
10. 10 Water and Waste water Engineering Gorden ,Fair& Gayer Okun John willey& Sons