

LESSON PLAN

NAME OF FACULTY:- SACHIN SHARMA
 SUBJECT:- W.S.W.W.E.
 BRANCH:- CIVIL ENGG.
 SEMESTER:- 4th
 DURATION:- 15 Weeks(15 Feb to 14 June 2024)

Sno.	Theory		Practical	
	Lecture Day	Topic	Practical Day	Topic
1.	1.	Necessity and brief description of planned water supply system.	1.	To determine turbidity of water sample.
	2.	Sources of water – surface/sub-surface sources (only description)	2.	dissolved oxygen of given sample.
2.	1.	Water requirement, Per capita demand, Factors affecting per capita demand.		revision
	2.	Rate of demand and variation in rate of demand.		
3.	1.	Design Period, Factors governing the design period, Design period values for different components of a water supply scheme.	1.	To determine pH value of water.
	2.	Population forecasting methods (with Numerical Problems).	2.	To perform jar test for coagulation
4.	1.	Physical, Chemical and bacteriological tests and their significance.		revision
	2.	Standard of potable water as per Indian Standard, water meter.		
5.	1.	Sedimentation - Purpose, Types of sedimentation tanks Coagulation /Flocculation - usual coagulation and their feeding.	1.	To determine BOD of given sample.
	2.	Filtration - Slow and Rapid sand filters, their significance and suitability.	2.	To determine residual chlorine in water
6.	1.	Necessity of disinfection of water, forms of chlorination, break point chlorine, residual chlorine, application of chlorine.		revision
	2.	Miscellaneous Treatments – Aeration, Aquaguard, Reverse Osmosis System, Requirement of a good water distribution system.		
7.		1ST SESSIONAL TEST		1ST SESSIONAL TEST
8.	1.	Layout of distribution networks, Methods of distribution.	1.	To determine conductivity of water and total dissolved solids To study and demonstrate the joining / threading of GI Pipes, CI Pipes, SWG pipes, PVC pipes and copper pipes.
	2.	Distribution reservoirs – their functions and types.	2.	
9.	1.	Storage capacity of distribution reservoirs.	1.	Study of water purifying process by visiting a field lab.
	2.	Stand Pipes.	2.	To study the installation and working of water cooler available in Institution.
10.	1.	Sanitation – Purpose and necessity of sanitation.		revision
	2.	Components of sewerage system - Manhole		
11.	1.	Types of sewage and types of sewerage system.	1.	To study the installation and working of Reverse Osmosis System available in Institution.
	2.	Properties of sewage and IS standards for analysis of sewage., Physical, chemical and bacteriological parameters of sewage.	2.	To study the working of Rain Water Harvesting System.
12.		2ND SESSIONAL TEST		2ND SESSIONAL TEST
13.	1.	Sewage disposal methods - Disposal by dilution and land treatment ., Self-purification of stream, Nuisance due to disposal., Primary and secondary treatment .	1.	To demonstrate the drainage of roof top rain water of Institutional building.
	2.	Screens, Grit chambers, Skimming tanks., Plain sedimentation tanks., Filtration, Trickling filter, Sludge treatment and disposal. , Oxidation Ponds (Visit to a sewage treatment plant).	2.	Prepare a report of a field visit to sewage treatment plant., Undertake a field visit to water treatment plant and prepare a report.
14.		revision		revision
15.		3RD SESSIONAL TEST		3RD SESSIONAL TEST