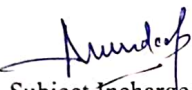


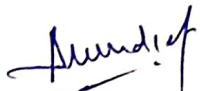
Name of the Faculty		Mr. Arundeep Singh Panwar	Semester	6th
Discipline		Civil Engineering	Lecture per week	2
Subject		WATER SUPPLY AND WASTE WATER ENGINEERING	Delivery Date of Lecture	Remarks
Duration		20 Jan 2025 - 02 May, 2025 (15 weeks)		
Week	Lecture Day	Topic (including assignment / test)		
1st	1st and 2nd	A. WATER SUPPLY UNIT I Quantity and Quality of Water Necessity and brief description of planned water supply system. Sources of water – surface/sub-surface sources (only description)		
2nd	3& 4	Water requirement, Per capita demand, Factors affecting per capita demand Rate of demand and variation in rate of demand Design Period, Factors governing the design period, Design period values for different components of a water supply scheme		
3rd	5& 6	Population forecasting methods (with Numerical Problems) Physical, Chemical and bacteriological tests and their significance		
4th	7& 8	1.8 Standard of potable water as per Indian Standard, water meter		
5th	9&10	Sessional		
6th	11 &12	UNIT II Water Treatment **2.1 Sedimentation - Purpose, Types of sedimentation tanks **2.2 Coagulation / Flocculation - usual coagulation and their feeding **2.3 Filtration - Slow and Rapid sand filters, their significance and suitability		
7th	13&14	2.4 Necessity of disinfection of water, forms of chlorination, break point chlorine, residual chlorine, application of chlorine. 2.5 Miscellaneous Treatments – Aeration, Aquaguard, Reverse Osmosis System		
8th	15&16	UNIT III Water Distribution System 3.1 Requirement of a good water distribution system 3.2 Layout of distribution networks 3.3 Methods of distribution 3.4 Distribution reservoirs – their functions and types 3.5 Storage capacity of distribution reservoirs 3.6 Stand Pipes		
9th	17&18	Sessional		
10th	19&20	WASTE WATER ENGINEERING UNIT IV Waste Water Disposal 4.1 Sanitation – Purpose and necessity of sanitation 4.2 Components of sewerage system - Manhole 4.3 Types of sewage and types of sewerage system 4.4 Properties of sewage and IS standards for analysis of sewage		
		4.5 Physical, chemical and bacteriological parameters of sewage 4.6 Sewage disposal methods - Disposal by dilution and land treatment		

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11 th	21&22	4.7 Self-purification of stream, Nuisance due to disposal UNIT V Sewage Treatment 5.1 Primary and secondary treatment		
12th	23&24	5.2 Screens, Grit chambers, Skimming tanks 5.3 Plain sedimentation tanks		
13th	25&26	5.4 Filtration, Trickling filter 5.5 Sludge treatment and disposal 5.7 Oxidation Ponds (Visit to a sewage treatment plant)		
14th	27&28	Sessional		
15th	29&30	Revision of syllabus, display/Intimation of 3rd Sessional marks, Academic evaluation-analysis of Sessionals.		


Subject Incharge


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