

LESSON PLAN-WINTER-2022
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline- CIVIL DEPARTMENT	Semester-5 TH	Name of teaching faculty- ROHIT KUMAR		
Subject- WSWWE	No class allotted/ per week -5	SEM From date- 01/10/2021 to 08/1/2022 No of weeks- 17		
3RD	9/15/2022	Theory Topics		
	9/16/2022	Introduction to Water Supply, Quantity and Quality of water- Necessity of treated water supply		
4TH	9/19/2022	Per capita demand, variation in demand and factors affecting demand		
	9/20/2022	Methods of forecasting population, Numerical problems using different methods		
	9/21/2022	Methods of forecasting population, Numerical problems using different methods		
	9/22/2022	Impurities in water – organic and inorganic, Harmful effects of impurities		
	9/23/2022	Impurities in water – organic and inorganic, Harmful effects of impurities		
	9/24/2022	Analysis of water –physical, chemical and bacteriological		
5TH	9/26/2022	Analysis of water –physical, chemical and bacteriological		
	9/27/2022	Water quality standards for different uses		
	9/28/2022	Water quality standards for different uses		
	9/29/2022	Sources and Conveyance of water- Surface sources – Lake, stream, river and impounded reservoir		
	9/30/2022	Underground sources – aquifer type & occurrence – Infiltration gallery, infiltration		
1ST	10/1/2022	Yield from well- method s of determination, Numerical problems using yield		
3RD	10/10/2022	Intakes – types, description of river intake, reservoir intake, canal intake		
	10/11/2022	Intakes – types, description of river intake, reservoir intake, canal intake		
	10/12/2022	Pumps for conveyance & distribution – types, selection, installation		
	10/13/2022	Pipe materials – necessity, suitability, merits & demerits of each type		
	10/14/2022	Pipe materials – necessity, suitability, merits & demerits of each type		
	10/15/2022	Pipe joints – necessity, types of joints, suitability, methods of jointing, Laying of pipes – method		
4TH	10/17/2022	Pipe joints – necessity, types of joints, suitability, methods of jointing, Laying of pipes – method		
	10/18/2022	Treatment of water- Flow diagram of conventional water treatment system		
	10/19/2022	Treatment process / units : Aeration ; Necessity		
	10/20/2022	Plain Sedimentation : Necessity, working principles, Sedimentation tanks – types, essential features, operation & maintenance		
	10/21/2022	Plain Sedimentation : Necessity, working principles, Sedimentation tanks – types, essential features, operation & maintenance		
	10/22/2022	Sedimentation with coagulation: Necessity, principles of coagulation, types of coagulants, Flash Mixer, Flocculator, Clarifier (Definition and concept only)		
	10/24/2022	Sedimentation with coagulation: Necessity, principles of coagulation, types of coagulants, Flash Mixer, Flocculator, Clarifier (Definition and concept only)		

5TH	10/25/2022	Filtration : Necessity, principles, types of filters, Slow Sand Filter, Rapid Sand Filter and Pressure Filter – essential features		
	10/26/2022	Filtration : Necessity, principles, types of filters, Slow Sand Filter, Rapid Sand Filter and Pressure Filter – essential features		
	10/27/2022	Disinfection : Necessity, methods of disinfection Chlorination – free and combined chlorine demand, available chlorine, residual chlorine, pre-chlorination, break point chlorination, super-chlorination	472	
	10/28/2022	Disinfection : Necessity, methods of disinfection Chlorination – free and combined chlorine demand, available chlorine, residual chlorine, pre-chlorination, break point chlorination, super-chlorination		
	10/29/2022	Softening of water – Necessity, Methods of softening – Lime soda process and Ion exchange method (Concept Only)		
6TH	10/31/2022	Softening of water – Necessity, Methods of softening – Lime soda process and Ion exchange method		
1ST	11/1/2022	Distribution system And Appurtenance in distribution system: General requirements, types of distribution system-gravity, direct and combined		
	11/2/2022	General requirements, types of distribution system-gravity, direct and combined		
	11/3/2022	Methods of supply – intermittent and continuous		
	11/4/2022	Methods of supply – intermittent and continuous		
	11/5/2022	Distribution system layout – types, comparison, suitability		
2ND	11/7/2022	Distribution system layout – types, comparison, suitability		
	11/8/2022	Valves-types, features, uses, purpose-slucie valves, check valves, air valves, scour valves, Fire hydrants, Water meters		
	11/9/2022	Valves-types, features, uses, purpose-slucie valves, check valves, air valves, scour valves, Fire hydrants, Water meters		
	11/10/2022	W/s plumbing in building- Method of connection from water mains to building supply		
	11/11/2022	General layout of plumbing arrangement for water supply in single storied and multi-storied building as per I.S. code.		
	11/12/2022	WASTE WATER ENGINEERING- Introduction- Aims and objectives of		
3RD	11/14/2022	Definition of terms related to sanitary engineering		
	11/15/2022	Definition of terms related to sanitary engineering		
	11/16/2022	Systems of collection of wastes– Conservancy and Water Carriage System – features, comparison, suitability		
	11/17/2022	Systems of collection of wastes– Conservancy and Water Carriage System – features, comparison, suitability		
	11/18/2022	Quantity and Quality of sewage- Quantity of sanitary sewage – domestic & industrial sewage, variation in sewage flow, numerical problem on computation quantity of sanitary sewage		
	11/19/2022	Quantity of sanitary sewage – domestic & industrial sewage, variation in sewage flow, numerical problem on computation quantity of sanitary		
4TH	11/21/2022	Computation of size of sewer, application of Chazy's formula, Limiting velocities of flow : self-cleaning and scouring		
	11/22/2022	Computation of size of sewer, application of Chazy's formula, Limiting velocities of flow : self-cleaning and scouring		
	11/23/2022	General importance, strength of sewage, Characteristics of sewage-physical, chemical & biological		
	11/24/2022	General importance, strength of sewage, Characteristics of sewage-physical, chemical & biological		
	11/25/2022	Concept of sewage-sampling, tests for – solids, pH, dissolved oxygen, BOD, COD		
	11/26/2022	Concept of sewage-sampling, tests for – solids, pH, dissolved oxygen, BOD, COD		
	11/28/2022	Sewerage system- Types of system-separate, combined, partially separate , features, comparison between the types, suitability		

5TH	11/29/2022	Types of system-separate, combined, partially separate , features, comparison between the types, suitability		
	11/30/2022	Shapes of sewer – rectangular, circular, avoid-features, suitability		
1ST	12/1/2022	Shapes of sewer – rectangular, circular, avoid-features, suitability		
	12/2/2022	Laying of sewer-setting out sewer alignment		
	12/3/2022	Laying of sewer-setting out sewer alignment		
2ND	12/5/2022	Sewer appurtenances and Sewage Disposal- Manholes and Lamp holes – types, features, location, function		
	12/6/2022	Manholes and Lamp holes – types, features, location, function		
	12/7/2022	Inlets, Grease & oil trap – features, location, function		
	12/8/2022	Storm regulator, inverted siphon – features, location, function		
	12/9/2022	Storm regulator, inverted siphon – features, location, function		
	12/10/2022	Disposal on land – sewage farming, sewage application and dosing, sewage sickness-causes and remedies		
3RD	12/12/2022	Disposal by dilution – standards for disposal in different types of water bodies, self purification of stream		
	12/13/2022	Disposal by dilution – standards for disposal in different types of water bodies, self purification of stream		
		Sewage treatment- (Note: 1.Design of treatment units excluded.		
		Principles of treatment, flow diagram of conventional treatment		
	12/15/2022	Principles of treatment, flow diagram of conventional treatment		
	12/16/2022	Primary treatment – necessity, principles, essential features, functions		
	12/17/2022	Primary treatment – necessity, principles, essential features, functions		
4TH	12/19/2022	Secondary treatment – necessity, principles, essential features, functions		
	12/20/2022	Secondary treatment – necessity, principles, essential features, functions		
	12/21/2022	Secondary treatment – necessity, principles, essential features, functions		
	12/22/2022	Sanitary plumbing for building- Requirements of building drainage, layout of lavatory blocks in residential buildings, layout of building drainage		
	12/23/2022	Plumbing arrangement of single storied & multi storied building as per I.S. code practice		
	12/24/2022	Sanitary fixtures – features, function, and maintenance and fixing of the fixtures – water closets, flushing cisterns, urinals, inspection chambers, traps, anti-syphonage pipe		

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