KIIT POLYTECHNIC, BHUBANESWAR

LESSON PLAN
Session (2022-2023)

Discipline: Civil Engineering	**Semester:** 5th W/2022	**Name of the Faculty:** Mrs. Nivedita Panda **(Lecturer)** **Email:** nivedita.pandafce@kp.kiit.ac.in
Subject: Water Supply & Waste Water Engg.	**No. of Days/week:** 05	**Start Date:** 14/09/2022 **End Date:** 21/01/2023

Week	Class Day	Theory Topics
1st	1st	Necessity of treated water supply and historical development.
	2nd	Water requirements, per capita demand.
	3rd	Variation in demand, factors affecting demand.
	4th	Methods of forecasting population, Numerical problems.
2nd	1st	Problem practice
	2nd	Surface sources, underground sources.
	3rd	Infiltration gallery and Infiltration Well
	4th	Yield from a well, problem solving
3rd	1st	Doubt clearing class
	2nd	Sinking of well, well component, well development, maintenance and well pump.
	3rd	Impurities in water, harmful effects .
	4th	Analysis of water, water quality standards
4th	1st	Doubt clearing class
	2nd	Intakes and pipe materials
	3rd	Pipe joint, pipe laying and pipe corrosion
	4th	Doubt clearing class
5th	1st	Flow diagram of water treatment system and treatment process
	2nd	Plain sedimentation, sedimentation with coagulation
	3rd	Filtration of water
	4th	Disinfection of water
6th	1st	Miscellaneous treatment methods
	2nd	Chemical requirements, softening numerical problems
	3rd	Types of distribution system, methods of supply
	4th	Maintenance and numerical problems on size of pipes.

7th	1st	Storage ,distribution system layout , loss and wastage
	2nd	Doubt clearing class
	3rd	Appurtenances in distribution system
	4th	w/s plumbing in building
8th	1st	Introduction to sanitary Engg. Aims, objectives and definition of terms.
	2nd	System of collection of wastes
	3rd	Quantity of sanitary sewage and numerical problems.
	4th	Computation of size of sewers and problem practice
9th	1st	Types of sewerage system , shape of sewer and sewer materials.
	2nd	Laying of sewer and sewer appurtenances.
	3rd	Sewage characteristics
	4th	Analysis of sewage
10th	1st	C, N, S – cycle
	2nd	Doubt clearing class
	3rd	Sewage disposal on land
	4th	Sewage disposal by dilution
11th	1st	Principle and flow diagram of sewage treatment
	2nd	Primary treatment
	3rd	Oxidation ditch
	4th	Trickling filter
12th	1st	Secondary treatment
	2nd	Doubt clearing class (sewage disposal on land, by dilution)
	3rd	Doubt clearing class (primary treatment, oxidation ditch)
	4th	Doubt clearing class (Trickling filter, secondary treatment)
13th	1st	Previous year question discussion (2020,2019) water supply
	2nd	Previous year question discussion (2018,2017) water supply
	3rd	Previous year question discussion (2016,2015) water supply
	4th	Previous year question discussion (2014,2013) water supply
14th	1st	Previous year question discussion (2020,2019) waste water
	2nd	Previous year question discussion (2018,2017) waste water
	3rd	Previous year question discussion (2016,2015) waste water
	4th	Previous year question discussion (2014,2013) waste water
15th	1st	Doubt clearing class (numerical related to population forecasting
	2nd	Doubt clearing class (numerical related to yield)

	3rd	Doubt clearing class (Water supply system)
	4th	Doubt clearing class(Waste water engineering)