

# PARALA MAHARAJA ENGINEERING COLLEGE, BERHAMPUR

## LESSON PLAN

**Semester- 5<sup>th</sup> (Sec-B)**

**Session- 2019-20 (Odd)**

**Subject (PC15G001)- Water Supply and Sanitary Engineering (3-0-0)**

**Branch/Course-Civil Engineering/B.Tech**

**Name of Faculty: Prof. C. R. Mohanty**

Lecture No	Module	Topic to be delivered	Remarks/Sign of Faculty Member
1	Module-I	<b>Quantity of water:</b> Per capita demand, design period	
2	Module-I	population forecast	
3	Module-I	Population forecast, fluctuation in demand	
4	Module-I	<b>General requirement for water supply:</b> Sources	
5	Module-I	Types of intakes	
6	Module-I	Pumping	
7	Module-I	Transportation of water	
8	Module-I	<b>Quality of water:</b> Physical characteristics	
9	Module-I	Chemical characteristics	
10	Module-I	Biological characteristics of water	
11	Module-I	Necessity of treatment, water quality standards	
12	Module-II	<b>Engineering system for water treatment:</b> Aeration	
13	Module-II	Coagulation	
14	Module-II	Flocculation	
15	Module-II	Sedimentation	
16	Module-II	Softening	
17	Module-II	Filtration	
18	Module-II	Disinfection	
19	Module-II	Water distribution system	
20	Module-II	Removal of color, tastes and odour control, algicide	
21	Module-II	Removal of iron and manganese, fluoridations	
22	Module-III	<b>Generation and collection of wastewater:</b> Sanitary & Storm	
23	Module-III	Combined sewerage systems, Quantities of sanitary wastes and storm water	
24	Module-III	Design of sewerage system	
25	Module-III	<b>Engineered system for wastewater treatment:</b> Primary treatment	
26	Module-III	Screening, Grit removal, Sedimentation and aided with coagulation	
27	Module-IV	<b>Secondary treatment:</b> Basis of microbiology	
28	Module-IV	Suspended-culture systems(ASP)	
29	Module-IV	Suspended-culture systems (Modifications)	
30	Module-IV	Attached-culture systems(TF)	
31	Module-IV	Attached-culture systems(RBC)	
32	Module-IV	Secondary clarification, Disinfections of effluents	
33	Module-IV	Sludge characteristics	
34	Module-IV	Sludge thickening	
35	Module-IV	Sludge disposal	

Signature of Faculty Member

Counter Signature of HOD