

PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Civil Engineering

Faculty Name: - Lalit Kumar

Subject Name: - HEPD

Year/Semester: - 4th /7th

Subject Code: - CE-413E

LESSON PLAN

Sr. No.	Lecture No.	Topics To Be Covered	Tentative Date
1	L1	Unit:1 Introduction: Sources of power, estimation of water power	16/7/2019
2	L2	Necessity and importance of harnessing small hydro power,	17/7/2019
3	L3	Flow duration and power duration curves	22/7/2019
4	L4	Load curve, load factors, Capacity factors, utilization factors	23/7/2019
5	L5	Firm and secondary power.	24/7/2019
6	L6	Types of Hydro Power Plants Elements of Hydro power	29/7/2019
7	L7, L8	Classification of hydro-power plants	30/7/2019 31/7/2019
8	L9,L10	Storage plants diversion canal development,	5/8/2019 6/8/2019
9	L11	Pumped storage plants, run-of-river plants	7/8/2019
10	L12, L13	Tidal power plants, base load Peak load plants in a power grid.	12/8/2019 13/8/2019
11	L14,15	Unit:2 Intakes: Intake structures, functions and their types	14/8/2019 19/8/2019
12	L16,L17	Components of intakes-forebay, trash racks, gates and valves, force required to operate gates.	20/8/2019 21/8/2019
13	L18,L19	Conveyance System: Penstocks, design criterion,	26/8/2019 27/8/2019
14	L20,L21	economical diameter anchor blocks, cradles and footings,	28/8/2019 2/9/2019
15	L22,L23	Water hammer, instantaneous closure of power canal	3/9/2019 4/9/2019
16	L24,L25	Surge tank, surges in canals	9/9/2019 10/9/2019

17	L26	Numerical problems	11/9/2019
18	L27, L28	Unit:3 Turbines: Types of turbines, specific speed and classification of turbines	16/9/2019 17/9/2019
19	L29,L30	Synchronous speed, scroll casing, flumes and draft tubes	18/9/2019 23/9/2019
20	L31,L32	Dimensions of scroll casing and draft tubes	24/9/2019 25/9/2019
21	L33	Setting of turbines	30/9/2019
22	L34	Numerical Problem	7/10/2019
23	L35, L36	Unit:4 Power House: General layout and arrangements of hydro-power number and size of units, sub-structure,	9/10/2019 14/10/2019
24	L37,L38	spacing of super-structure, underground power stations, tidal power	15/10/2019 16/10/2019
25	L39, L40	Numerical Problems	23/10/2019 30/10/2019
26	L41, L42	Revision of Numerical	4/11/2019 5/11/2019
27	L43, L44	Revision of Numerical	6/11/2019 11/11/2019
28	L45, L46	Revision of Numerical	13/11/2019 18/11/2019

Lalit Kumar
(COURSE INCHARGE)