

# **BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK**

**LESSON PLAN (2022-23)**

**BY: ER. PRAFULLA KUMAR PANDA**



**SUBJECT : POWER PLANT INSTRUMENTATION**

**SEMESTER : 6<sup>th</sup>**

**BRANCH : AE & I**

# Bhubanananda Orissa School of Engineering

## Lesson Plan

<b>Discipline:</b> <b>AE&amp;I</b>	<b>Semester:</b> 6 <sup>th</sup>	<b>Name of the Teaching Faculty:</b> Prafulla Kumar Panda
<b>Subject:</b> <b>PPI</b>	No of Days/per week class allotted:4	Semester from 14/02/2023 to 23.05.2023 <b>No of weeks:</b> 15
<b>Week No. 15</b>	<b>Class Day</b> <b>TUE,WED,THU, FRI</b>	<b>Theory Topics</b>
1 <sup>st</sup>	14/02/2023	Introduction of the Subject and Syllabus discussion.
	15/02/2023	<b>UNIT –I</b> 1. Introduction: 1.1 Importance of electric power plant.
	16/02/2023	1.2 Definition of power plant.
	17/02/2023	1.3 Types of power plants. Energy scores in India.
2 <sup>nd</sup>	21/02/2023	1.4 Sources of energy.
	22/02/2023	1.5 Recent development in power generation.
	23/02/2023	1.6 Direct energy conversion system.
	24/02/2023	1.7 Alternative energy system.
3 <sup>rd</sup>	28/02/2023	1.8 Energy scores in India.
	01/03/2023	1.9 Development of electric power in India.
	02/03/2023	<b>Chapter 1 Revision, Previous years questions discussion.</b>
	03/03/2023	<b>UNIT –II</b> 2. Steam power plant: 2.1 Operation of condensing & non condensing power plants.
4 <sup>th</sup>	09/03/2023	2.2 Choice of steam, temperature & pressure.
	10/03/2023	2.3 Important features of a modern coal fire steam power plant.
5 <sup>th</sup>	14/03/2023	2.4 Basic working principle of a thermal power plant.
	15/03/2023	2.5 Different units of a steam power plants. A. Boiler unit.
	16/03/2023	B. Steam nozzles & turbine.
	17/03/2023	C. Condensing unit & function of condenser.
6 <sup>th</sup>	21/03/2023	D. Cooling unit.
	22/03/2023	<b>Class Test -I</b>
	23/03/2023	E. Cooling ponds & cooling towers.
	24/03/2023	<b>Chapter 2 Revision, Previous year's questions discussion.</b>

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I

	28/03/2023	<b>UNIT –III</b> 3. Hydroelectric Power plant: 3.1 Definition of Hydroelectric power plant.
7th	29/03/2023	3.2 Essential features of a water power plant.
	31/03/2023	3.3 Classification of a hydro power plant.
	31/03/2023	3.4 Hydraulic turbines & its operating characteristics.
8th	04-04-2023	3.5 Selection of water turbine.
	05/04/2023	3.6 Carbine hydro & steam power plant.
	06/04/2023	3.7 Comparison of hydropower station with thermal power station.
9th	11/04/2023	<b>Chapter 3 Revision, Previous year's questions discussion.</b>
	12/04/2023	<b>UNIT –IV</b> 4. Nuclear Power plant: 4.1 General introduction of nuclear physics.
	13/04/2023	<b>Internal -I</b>
10th	18/04/2023	4.2 description of nuclear reactor.
	19/04/2023	4.3 Classification of nuclear reactor.
	20/04/2023	4.4 safety uranium.
	21/04/2023	4.5 Methods of enriching uranium.
11th	25/04/2023	4.6 Nuclear power plant in India..
	26/04/2023	4.7 Features of nuclear power.
	27/04/2023	<b>Chapter 4 Revision, Previous years questions discussion.</b>
	28/04/2023	<b>UNIT –V</b> 5. Power plant instrumentation 5.1 General classification of instrument.
12th	02-05-2023	5.2 Pressure measuring instrument.
	03/05/2023	5.3 Temperature measuring instrument.
	04/05/2023	5.4 Flow measuring instrument.
	04/05/2023	5.5 Analysis of combustion of gases.
13 <sup>th</sup>	09/05/2023	<b>Chapter 5 Revision, Previous years questions discussion.</b>
	10/05/2023	<b>UNIT –VI</b> 6. Instrumentation for transmission for power: 6.1 Instrumentation schemed used for HVDC. &
	11/05/2023	EHVAC transmission system.
	12/05/2023	6.2 Energy management.

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		i. electronic instrumentation system adopted for energy conservation
14th	16/05/2023	ii. Electronic instrumentation scheme used for energy audit
	17/05/2023	6.3 Economics of power plant.
15th	18/05/2023	Chapter 6 Revision, Previous years questions discussion.
	23/05/2023	OVERALL PREVIOUS YEARS QUESTIONS DISCUSSION

*pragfulu kumar panda*

Signature of Faculty

HOD, AE&I

Academic Coordinator

Principal

