BHUBANANANDA ORISSA SCHOOL OF ENGINEERING, CUTTACK

ELECTRICAL ENGG.DEPARTMENT

LESSON PLAN

SEMESTER: 4TH (C)

SESSION – SUMMER (**2021-22**)

SUBJECT: GENERATION, TRANSMISSION & DISTRIBUTION

NAME OF FACULTY: Mrs. PRIYANKA SAHU

Discipline: **Electrical Engg.**	Semester: **4Th (C)**	Name of the teaching faculty: **Mrs. PRIYANKA SAHU**
Subject-**GENERATION TRANSMISSION & DISTRIBUTION**	No. of Days/per week class allotted: **04 PERIODS /WEEK (MON-1,TUE-1,WED-1,THUR-1 PERIOD EACH)**	Semester: From Date: **10/03/2022** To Date: **10/06/2022** No. of weeks: **14 WEEKS**
Week	**Class Day**	**Theory/Practical Topics**
1st (10/03/2022-12/03/2022)	10/03/2022	**1. GENERATION OF ELECTRICITY** 1.1 Elementary idea on generation of electricity fromThermal Power station.
2nd (14/03/2022-19/03/2022)	14/03/2022	1.1 Elementary idea on generation of electricity fromHydel Power station
	15/03/2022	1.1 Elementary idea on generation of electricity fromNuclear Power station.
	16/03/2022	1.2 Introduction to Solar Power Plant (Photovoltaic cells).
	17/03/2022	1.2 Introduction to Solar Power Plant (Photovoltaic cells).
3rd (21/03/2022-26/03/2022)	21/03/2022	1.3 Layout diagram of generating stations.
	22/03/2022	**2. TRANSMISSION OF ELECTRIC POWER** 2.1 Layout of transmission and distribution scheme.
	23/03/2022	2.2 Voltage Regulation & efficiency of transmission.
	24/03/2022	2.3 State and explain Kelvin's law for economical size ofconductor.
4th (28/03/2022-02/04/2022)	28/03/2022	2.4 Corona and corona loss on transmission lines.
	29/03/2022	**3. OVER HEAD LINES** 3.1 Types of supports, size and spacing of conductor.
	30/03/2022	3.2 Types of conductor materials. 3.3 State types of insulator and cross arms.

	31/03/2022	3.4 Sag in overhead line with support at same level anddifferent level. (approximate formula effect of wind, ice and temperature on sag)
5TH (04/04/2022-09/04/2022)	04/04/2022	**CLASS TEST 1**
	05/04/2022	3.5 Simple problem on sag.
	06/04/2022	**4. PERFORMANCE OF SHORT & MEDIUM LINES** 4.1. Calculation of regulation and efficiency.
	07/04/2022	4.1 Calculation of regulation and efficiency.
6TH (11/04/2022-16/04/2022)	11/04/2022	4.1 Calculation of regulation and efficiency.
	12/04/2022	**5.EHV TRANSMISSION** 5.1 EHV AC transmission.
	13/04/2022	5.1..1. Reasons for adoption of EHV AC transmission.
	14/04/2022	**AMBEDKAR JAYANTI**
7th (18/04/2022-23/04/2022)	18/04/2022	5.1..2. Problems involved in EHV transmission.
	19/04/2022	5.2 HV DC transmission.
	20/04/2022	5.2 HV DC transmission.
	21/04/2022	5.2.1. Advantages and Limitations of HVDCtransmission system.
8th (25/04/2022-30/04/2022)	25/04/2022	**6. DISTRIBUTION SYSTEMS** 6.1 Introduction to Distribution System.
	26/04/2022	6.2 Connection Schemes of Distribution System: (Radial,Ring Main and Inter connected system)
	27/04/2022	**CLASS TEST 2**
	28/04/2022	6.3 DC distributions. 6.3.1 Distributor fed at one End.
9th (02/05/2022-07/05/2022)	02/05/2022	6.3.2 Distributor fed at both the ends. 6.3.3 Ring distributors.
	03/05/2022	**Id-UL-Fitre**
	04/05/2022	6.4 AC distribution system. 6.4.1Method of solving AC distribution problem. 6.4.2. Three phase four wire star connected system arrangement.
	05/05/2022	**7. UNDERGROUND CABLES**

		7.1 Cable insulation and classification of cables.
10th (09/05/2022-14/05/2022)	09/05/2022	7.2 Types of L. T. & H.T. cables with constructional features.
	10/05/2022	7.3 Methods of cable lying.
	11/05/2022	**INTERNAL ASSESSMENT**
	12/05/2022	**INTERNAL ASSESSMENT**
11th (16/05/2022-21/05/2022)	16/05/2022	**BUDDHA PURNIMA**
	17/05/2022	7.4 Localization of cable faults: Murray and Varley loop test for short circuit fault / Earth fault.
	18/05/2022	**8. ECONOMIC ASPECTS** 8.1 Causes of low power factor and methods of improvement of power factor in power system.
	19/05/2022	8.2 Factors affecting the economics of generation: (Define and explain)
12th (23/05/2022-28/05/2022)	23/05/2022	8.2.1 Load curves.
	24/05/2022	8.2.2 Demand factor. 8.2.3 Maximum demand.
	25/05/2022	8.2.4 Load factor. 8.2.5 Diversity factor.
	26/05/2022	8.2.6 Plant capacity factor.
13th (30/05/2022-04/06/2022)	30/05/2022	**SABITRI AMABASYA**
	31/05/2022	8.3 Peak load and Base load on power station.
	01/06/2022	**9. TYPES OF TARIFF** 9.1 Desirable characteristic of a tariff.
	02/06/2022	9.2. Explain flat rate, block rate, two part and maximum demand tariff. (Solve Problems)
14th (06/06/2022-10/06/2022)	06/06/2022	**CLASS TEST 3**
	07/06/2022	**10. SUBSTATION** 10.1 Layout of LT, HT and EHT substation.
	08/06/2022	10.2 Earthing of Substation, transmission and distribution lines.
	09/06/2022	**REVISION**