

DHABALESWAR INSTITUTE OF POLYTECHNIC

LESSON PLAN

Discipline: Elat. Engg.	Semester: 6th	Name of the Teaching Faculty Rituraj Patra
Subject: SGPD	No. of days per week Class Allotted: 5	Semester from Dt. 14-2-23 to Dt. 23-5-23 No. of Weeks: 15th
Week	Class Day	Theory / Practical Topics
1st	1st day	* Essential Feature of switchgear.
	2nd day	* Switch gear Equipment.
	3rd day	* Bus-Bar Arrangement
2nd	1st day	* Switch Gear Accommodation
	2nd day	* Short Circuit
	3rd day	* Fault in power system.
	4th day	* Symmetrical Faults on 3- ϕ system
	5th day	* Limitation of fault current
3rd	1st day	* Percentage Reactance
	2nd day	* Base KVA
		* Short ckt KVA
	3rd day	* Reactor control of short ckt current.
	4th day	* Location of reactor
	5th day	* Steps for symmetrical fault calculation.
4th	1st day	* Numerical on symmetrical fault.
	2nd day	* Desirable charac. of fuse element.
	3rd day	* Fuse element material.
	1st day	* Types of fuse
	2nd day	* Low & high voltage fuses.
5th	3rd day	* Current Carrying Capacity of fuse element
		* Difference bet ⁿ Fuse & C.B.

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Date

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Week	Class Day	Theory / Practical Topics
6th 6th	4th day	* Definition & Principle of C.B
	5th day	* Arc phenomenon & principle of Arc extinction
	1st day	* Method of Arc extinction
	2nd day	* Defn of Arc voltage, Re-striking voltage & recovery voltage.
	3rd day	* Classification of C.B.
7th	4th day	* Oil cut breaker & its classification
	5th day	* Plain break oil C.B
	1st day	* Arc control oil C.B
	2nd day	* Low oil C.B
	3rd day	* Maintenance of oil C.B
8th	4th day	* Air blast C.B & its application
	5th day	* SF-6 C.B
	1st day	* Vacuum C.B
	2nd day	* Switchgear Component
	3rd day	* Problem of cut interruption
9th	4th day	* Resistance switching
	1st day	* C.B Rating.
10th	1st day	* Defn of protective Relay.
	2nd day	* Fundamental equipment of Relay.
	3rd day	* Basic Relay operation.
	4th day	* Defn of Pickup current
	5th day	* Defn of Current setting
	1st day	* Defn of PSM & TSM
	2nd day	* Classification of Relay
	3rd day	* Induction type relay both directional & non-directional.
	4th day	* Over current Relay.

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11th	1st day 2nd day 3rd day 4th day	* Differential Relay * Current differential Relay * Voltage balance Relay * Types of protection.
12th	5th day 1st day 2nd day 3rd day 4th day	* Protection of alternator * Differential protection of alternator * Balanced earth fault protection * Protection of transformers. * Buchholz Relay.
13th	5th day 1st day 2nd day 3rd day	* Protection of Bus-Bar * Protection of transmission line * Mearz price voltage balance * Protection of feeders.
14th	4th day 5th day 1st day 2nd day 3rd day 4th day	* Voltage surge & causes of over voltage. * Internal cause of over voltage. * External cause of over voltage * Mechanism of lightning discharge * Lightning Arresters & its type. * Surge Absorbers.
15th	5th day 1st day 2nd day	* Advantage of static relay * Instantaneous over current relay * Principle of IDMT relay.