

DHABALESWAR INSTITUTE OF POLYTECHNIC

LESSON PLAN

Discipline	Semester	Name of the Teaching Faculty
Subject	No. of days per Week Class Alloted	Semester from Dt. _____ To Dt. _____ No. of Weeks: _____
Week	Class Day	Theory / Practical Topics
1st	1st	Installation, Commissioning and Testing of Machine:- Inspection on arrival of machine and inspection procedure before its installation.
	2nd	Generalized procedure of installation of Electrical Machines.
	3rd	Electric wiring for Motor and scotch gears.
	4th	General requirement for Electric Installation according to Indian Electricity rules.
	5th	Necessity of starters and relays for both DC and AC machines.
2nd	1st	Testing before giving supply and testing report.
	2nd	Installation, Commissioning and of Transformer.
	3rd	Basic idea on dispatch, inspection, storage and handling of transformer.
	4th	Civil Construction Features regard - Eng connection like ventilation, noise level, space for free movement.
	5th	Foundation and arrange of oil cabling and cable box for transformer provision for fire protection.
3rd	6th	Provision for bushing support location of scotch gear.
	1st	Steps for Commissioning fitting of all accessories.
	2nd	Filling of oil, drying out. Changing the breather with fresh silica gel.
	3rd	Cleaning of bushing, Fixing of conductor

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Week	Class Day	Theory / Practical Topics
4th	4th	Δ cables, earthing of tank and cover, neutral earthing.
	1st	Fixing of protection circuits and setting of relays.
	1st	Installation, commissioning & Testing of sub-station.
	2nd	Design and planning of indoor substation.
	3rd	General requirement of layout of indoor substation with key diagram.
5th	4th	Consideration of safe operation of substation
	5th	Installation of outdoor substation
	6th	Selection of site, transport & receipt of transformer, checking of insulation resistance of the winding testing of transformer oil, protection fittings, construction of mounting, earthing arrangement and final commissioning.
	1st	Testing and Commissioning of substation.
	2nd	Installation of control and relay panels.
6th	3rd	Preliminary Preparation.
	4th	Sequence card for erection of switch gear equipments.
	1st	Location of place
	2nd	Unpecking
	3rd	Completion
7th	4th	Erection
	5th	Relays
	6th	Bus-bar earthing connection, Earthing.
	1st	Connection to main cable.
	2nd	

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Week	Class Day	Theory / Practical Topics
9th	3rd day	Safety Precaution
	4th day	Installation of outdoor circuit breaker.
	5th day	Receipt and storage.
	1st day	Civil works.
	2nd day	various steps for installation
10th	3rd day	Pre-commissioning tests.
	4th day	Maintenance:-
	1st day	Fundamental of Maintenance.
	2nd day	Preventive Maintenance and planning
	3rd day	Daily, weekly, monthly, Half-yearly and yearly maintenance.
11th	4th day	Advantages of Preventive Maintenance.
	5th day	Breakdown Maintenance. List of tools / Instruments and Materials used for Maintenance.
	1st day	Marking or Preparing Maintenance
	2nd day	Schedule of DC Machines, Induction Machines, Synchronous Machines, Transformer, Transmission line.
	3rd day	Distribution line.
12th	4th day	Underground cables, circuit breakers, Switch gear.
	5th day	Protective relays and Substations.
	1st day	SF-6 circuit breakers, Batteries.
	2nd day	Substation Batteries.
	3rd day	Revision and Question discussions.