

Lesson Plan			
	Discipline:Electrical Engineering	Semester-6th Summer 2024	Name of the Teaching Faculty: Smt Swati Sukla
Sl. No.	Subject: Testing And Maintenance of Electrical Machine	No. Of Days/Week class allotted:05	Semester From date: 16/01/2024 To date: 26/04/2024. No of weeks: 15
	Weeks/Months	Class Day	Topic
1	1st Week	1st (16.01.2024)	1.1. Inspection of arrival of machine and inspection procedure before its installation.
		2nd(18.01.2024)	1.1. Inspection of arrival of machine and inspection procedure before its
		3rd(19.01.2024)	1.1. Inspection of arrival of machine and inspection procedure before its installation.
		4th(19.01.2024)	1.2. Generalized procedure of installation of Electrical machines.
		5th (20.01.2024)	1.3. Electric wiring for motors and switch gears.
2	2nd Week	1st(25.01.2024)	1.3. Electric wiring for motors and switch gears.
		2nd(27.01.2024)	1.4. General requirement for Electric Installation according to Indian Electricity rules.
3	3rd Week	1st(30.01.2024)	1.5. Necessity of starters and relays for both DC and AC machines.
		2nd(01.02.2024)	1.5. Necessity of starters and relays for both DC and AC machines.
		3rd(02.02.2024)	1.5. Necessity of starters and relays for both DC and AC machines.
		4th(02.02.2024)	1.6. Testing before giving supply and testing report.
		5th(03.02.2024)	1.6. Testing before giving supply and testing report.
4	4th Week	1st(06.02.2024)	2. 1 Basic idea on dispatch, inspection, storage and handling of transformer.
		2nd(08.02.2024)	2. 1 Basic idea on dispatch, inspection, storage and handling of transformer.
		3rd(09.02.2024)	2. 2 Civil construction feature regarding connection like ventilation, noise level,
		4th(09.02.2024)	2. 4 Cabling and cable box for transformer.
		5th(10.02.2024)	2. 5 Provision for fire protection.
5	5th Week	1st(13.02.2024)	2. 6 Provision for bushing support location of switch gear.
		2nd(15.02.2024)	2. 6 Provision for bushing support location of switch gear.
		3rd(16.02.2024)	2. 7 Steps for commissioning fitting of all accessories.
		4th(16.02.2024)	2. 8 Filling of oil, drying out.
		5th(17.02.2024)	2. 8 Filling of oil, drying out.
6	6th Week	1st(20.02.2024)	2. 9 Charging the breather with fresh silica gel.
		2nd(22.02.2024)	2. 9 Charging the breather with fresh silica gel.
		3rd(23.02.2024)	2. 10 Cleaning of bushing, fixing of conductor & cables, earthing of tank and cover, neutral earthing.
		4th(23.02.2024)	2. 10 Cleaning of bushing, fixing of conductor & cables, earthing of tank and cover, neutral earthing.
		5th(24.02.2024)	2. 10 Cleaning of bushing, fixing of conductor & cables, earthing of tank and cover, neutral earthing.
7	7th Week	1st(27.02.2024)	2. 10 Cleaning of bushing, fixing of conductor & cables, earthing of tank and cover, neutral earthing.
		2nd(29.02.2024)	2. 10 Cleaning of bushing, fixing of conductor & cables, earthing of tank and
		3rd(01.03.2024)	2. 11 Fixing of protection circuits and setting of relays.
		5th(02.03.2024)	3 . 1 Design and planning of indoor substation.

8	8th Week	1st(07.03.2024)	3 . 1 Design and planning of indoor substation.
		2nd(09.03.2024)	3 . 2 General requirement of layout of indoor substation with key diagram.
9	9th Week	1st((12.03.2024)	3 . 2 General requirement of layout of indoor substation with key diagram.
		2nd(14.03.2024)	3 . 3 Consideration of safe operation of substation
		3rd(15.03.2024)	3.4.1 Selection of site, transport & receipt of transformer, checking of insulation resistance of the winding, testing of transformer oil,
		4th(15.03.2024)	protection fittings, construction of mounting, earthing arrangement.
		5th(16.03.2024)	3.5.2. Preliminary preparation
10	10th Week	1st(19.03.2024)	3.5.3. Sequence card for erection of switch gear equipments.
		2nd(21.03.2024)	3.5.5. Unpacking 3.5.6. Foundation
		3rd(22.03.2024)	3.5.7. Erection 3.5.8. Relays
		4th(22.03.2024)	3 . 6 Bus-bar earthing connection, Earthing.
		5th(23.03.2024)	3.6.1. Connection to main cable.
11	11th Week	1st(28.03.2024)	3.6.2. Safety precaution
		2nd(30.03.2024)	3 . 7 Installation of outdoor circuit breaker: 3.7.1. Receipt and storage
12	12th Week	1st(02.04.2024)	3 . 7 Installation of outdoor circuit breaker: 3.7.1. Receipt and storage
		2nd(04.04.2024)	3 . 7 Installation of outdoor circuit breaker: 3.7.1. Receipt and storage
		3rd(05.04.2024)	3.7.2. Civil works
		4th(05.04.2024)	3.7.2. Civil works
		5th(06.04.2024)	3.7.3. Various steps for installation
13	13th Week	1st(09.04.2024)	3 . 8 Pre-commissioning tests
		2nd(12.04.2024)	4.1 Fundamental of maintenance.
		3rd(12.04.2024)	4.2 Preventive maintenance and planning
		4th(13.04.2024)	4.3 Advantages of Preventive maintenance:
14	14th Week	1st(16.04.2024)	4.4 Breakdown maintenance: List of tools
		2nd(18.04.2024)	instruments and materials used for maintenance
		3rd(19.04.2024)	Making or Preparing Maintenance schedule of DC machines
		4th(19.04.2024)	Induction machines, Synchronous machines
		5th(20.04.2024)	Transformer
15	15th Week	1st(23.04.2024)	Transmission line, Distribution lines,
		2nd(25.04.2024)	Underground cables, Circuit breakers,
		3rd(26.04.2024)	SF-6 circuit breakers,
		4th(26.04.2024)	Batteries in substation.