GIET(POLY),JAGATPURCUTTACK

DISCIPLINE--ElectricalEngg.	SEMESTER--6TH	NAME OF THE TEACHING FACULTY— AMIYA RANJAN DAS
SUBJECT-:TESTNG AND MAINTENANCE OF ELECTRICAL MACHINES	NO.OF DAYS PER WEEK CLASS ALLOTTED4+1{TUTORIAL}	SEMESTER:FROM---04.02.2025 TO---17.05.2025 NO OF WEEKS--15
WEEK	CLASS/DAY	THEORY TOPICS
1st	1st	**1.Installation,commissioning and Testing of machine.** 1.1-Inspection of arrival of machine and inspection procedure before its installation.
	2nd	1.1-Inspection of arrival of machine and inspection procedure before its installation(contd..)
	3rd	1.1-Inspection of arrival of machine and inspection procedure before its installation(contd..)
	4th	1.2-Generalized procedure of installation of electrical machines.
	5th	TUTORIAL
2nd	1st	1.2-Generalized procedure of installation of electrical machines(contd..)
	2nd	1.2-Generalized procedure of installation of electrical machines (contd..)
	3rd	1.3-Elctric wiring for motors and switchgears.
	4th	1.3-Elctric wiring for motors and switchgears(contd..)
	5th	TUTORIAL
3rd	1st	1.3-Elctric wiring for motors and switchgears(contd..)
	2nd	1.4-General requirement for electric installation according to Indian electricity rules.
	3rd	1.4-General requirement for electric installation according to Indian electricity rules(contd..)
	4th	1.4-General requirement for electric installation according to Indian electricity rules(contd..)
	5th	TUTORIAL
4th	1st	1.5-Necessity of starters and relays for both DC and AC machines.
	2nd	1.5-Necessity of starters and relays for both DC and AC machines(contd..)
	3rd	1.6-Testing before giving supply and testing report.
	4th	**2.Installation,commissioning and Testing of Transformer.** 2.1-Basic idea on dispatch,inspection,storage and handling of transformer.
	5th	TUTORIAL
5th	1st	2.1-Basic idea on dispatch,inspection,storage and handling of transformer(contd..)
	2nd	2.2-Civil construction feature regarding connection like ventilation,noise level, space for free movement.
	3rd	2.2-Civil construction feature regarding connection like ventilation,noise level, space for free movement (contd..)
	4th	2.2-Civil construction feature regarding connection like ventilation,noise level, space for free movement(contd..)
	5th	TUTORIAL
6TH	1st	2.3-Foundation and drainage of oil.
	2nd	2.4-Cabling and cable box for transformer.
	3rd	2.5-Provision for fire protection.
	4th	2.6-Provision for bushing support location of switchgear.

7TH	1st	2.7-Steps for commissioning fitting of all accessories.
	2nd	2.8-Filling of oil,dryingout.
	3rd	2.9-Charging the breather with fresh silica gel.
	4th	2.10-Cleaning of bushing,fixing of conductor & cables,earthing of tank and cover, neutral earthing.
	5th	TUTORIAL
8TH	1st	2.10-Cleaning of bushing,fixing of conductor & cables,earthing of tank and cover, neutral earthing (contd..)
	2nd	2.11-Fixing of protection circuits and setting of relays.
	3rd	**3.Installation,commissioning and Testing of Substation.** 3.1-Design and planning of indoor substation.
	4th	3.2-General requirement of layout of indoor substation with key diagram.
	5th	TUTORIAL
9TH	1st	3.3-Considration of safe operation of substation.
	2nd	3. 4-Instllation of outdoor substation. 3.4.1-Selection of site,transport &receipt of transformer,cheking of insulation resistance of the winding, testing of transformer oil, Protection fittings,construction of mounting,earthing arrangement & final commissioning.
	3rd	3.4.1-Selection of site,transport &receipt of transformer,cheking of insulation resistance of the winding, testing of transformer oil, Protection fittings,construction of mounting,earthing arrangement & final commissioning(contd..)
	4th	3.4.1-Selection of site,transport t &receipt of transformer,cheking of insulation resistance of the winding, testing of transformer oil, Protection fittings,construction of mounting,earthing arrangement & final commissioning(contd..)
	5th	TUTORIAL
10TH	1st	3.5-Testing and commissioning of substation. 3.5.1Installation of control and relay panels.
	2nd	3.5.2-Preliminary preparation. 3.5.3-Sequence card for erection of switchgear equipments.
	3rd	3.5.4-Location of place. 3.5.5- Unpacking 3.5.6-Foundation.
	4th	3.5.7-Erection. 3.5.8-Relays.
	5th	TUTORIAL
11TH	1st	3. 6-Bus-bar earthing connection,earthing. 3.6.1-Connection to main cable.
	2nd	3.6.2-Safety precaution.
	3rd	3. 7-Installation of outdoor circuit breaker. 3.7.1-Receipt and storage.
	4th	3.7.2-Civilworks. 3.7.3-Various steps for installation.
	5th	TUTORIAL
12TH	1st	3.7.4-Pre-commissioning tests.
	2nd	**4.Maintenance.** 4.1-Fundamental of maintenance.
	3rd	4.2-Preventive maintenance and planning.(Daily,weekly,monthly, Half-yearly &Yearly maintenance)
	4th	4.2-Preventive maintenance and planning. (Daily,weekly,monthly, Halfyearly & Yearly maintenance) (contd..)

13TH	1st	4.2-Preventive maintenance and planning.(Daily,weekly,monthly, Halfyearly & Yearly maintenance) (contd..) 4.3-Advantages of preventive maintenance.
	2nd	4.4-Break down maintenance.List of tools/instruments &materials used for maintenance.
	3rd	4.5-Making or preparing maintenance schedule of DC Machines,Synchronous machines,Transformer,Transmissionline, Distribution lines,Undergroundcables,Circuitbreakers,Switchgear & protective relays & Substations,SF-6 circuit breakers,Batteries in substation.
	4th	4.5-Making or preparing maintenance schedule of DC Machines, Synchronousmachines,Transformer,Transmissionline,Distributionlines,Undergroundcables,Circuitbreakers,Switchgear&protective
		Relays & Substations,SF-6circuitbreakers,Batteries in substation.(contd..)
	5th	TUTORIAL
14TH	1st	4.5-Making or preparing maintenance schedule of DC Machines, Synchronousmachines,Transformer,Transmissionline,Distributionlines,Undergroundcables,Circuitbreakers,Switchgear&protectiverelays&Substations,SF-6 circuit breakers,Batteries in substation. (contd..)
	2nd	4.5-Making or preparing maintenance schedule of DC Machines, Synchronousmachines,Transformer,Transmissionline,Distributionlines,Undergroundcables,Circuitbreakers,Switchgear&protectiverelays &Substations,SF-6 circuit breakers,Batteries in substation. (contd..)
	3rd	4.5-Making or preparing maintenance schedule of DC Machines, Synchronousmachines,Transformer,Transmissionline,Distributionlines,Undergroundcables,Circuitbreakers,Switchgear&protectiverelays&Substations,SF-6 circuit breakers,Batteries in substation. (contd..)
	4th	4.5-Making or preparing maintenance schedule of DC Machines, Synchronous machines,Transformer,Transmissionline,Distributionlines,Undergroundcables, Circuitbreakers,Switchgear&protectiverelays&Substations,SF-6 circuit breakers,Batteries in substation. (contd..)
	5th	TUTORIAL
15TH	1st	4.5-Making or preparing maintenance schedule of DC Machines, Synchronousmachines,Transformer,Transmissionline,Distributionlines,Undergroundcables,Circuitbreakers,Switchgear&protectiverelays&Substations,SF-6 circuit breakers,Batteries in substation. (contd..)
	2nd	4.5-Making or preparing maintenance schedule of DC Machines, Synchronousmachines,Transformer,Transmissionline,Distributionlines,Undergroundcables,Circuitbreakers,Switchgear&protectiverelays&Substations,SF-6 circuit breakers,Batteries in substation. (contd..)
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	4th	4.5-MakingorpreparingmaintenancescheduleofDCMachines,Synchronousmachines,Transformer, Transmission line, Distribution lines, Underground cables, Circuit breakers,Switchgear&protectiverelays&Substations,SF-6circuitbreakers,Batteries in substation. (contd..)
	5th	TUTORIAL

01.02.25
Sign of faculty

01.02.25
Sign of HOD

Head of Dept. (HOD)
Electrical & ETC Engg.
G.I.E.T (POLY), ...

01.2.25
Sign of Principal

Principal
GIET (Polytechnic)
Jagatpur, Cuttack