

LESSON PLAN

GIET(POLY),JAGATPURCUTTACK

DISCIPLINE-- ElectricalEngg.	SEMESTER-- 6 TH	NAMEOFTHETEACHINGFACULTY— AMIYA RANJAN DAS
SUBJECT- :TESTINGANDM AINTENANCE OFELECTRICALMAC HINES	NO.OFDAYS PER WEEKCLASS ALL OTED- 4+1{TUTORIAL}	SEMESTER:FROM---16.01.2024 TO—26.04.2024 NOOFWEEKS--15
WEEK	CLASS/DAY	THEORY/PRACTICALTOPICS
1 st	1 st	1.Installation,commissioningandTestingofmachine. 1.1-Inspectionofarrivalofmachineandinspectionprocedurebefore itsinstallation.
	2 nd	1.1-Inspectionofarrivalofmachineandinspectionprocedurebefore its installation (contd..)
	3 rd	1.1-Inspectionofarrivalofmachineandinspectionprocedurebefore itsinstallation (contd..)
	4 th	1.2-Generalizedprocedureofinstallationofelectricalmachines.
	5 th	TUTORIAL
2 nd	1 st	1.2-Generalizedprocedureofinstallationofelectrical machines(contd..)
	2 nd	1.2-Generalizedprocedureofinstallationofelectrical machines(contd..)
	3 rd	1.3-Elctricwiringformotorsandswitchgears.
	4 th	1.3-Elctricwiringformotorsandswitchgears(contd..)
	5 th	TUTORIAL
3 rd	1 st	1.3-Elctricwiringformotorsandswitchgears(contd..)
	2 nd	1.4-GeneralrequirementforelectricinstallationaccordingtoIndian electricityrules.
	3 rd	1.4-GeneralrequirementforelectricinstallationaccordingtoIndian electricityrules(contd..)
	4 th	1.4-GeneralrequirementforelectricinstallationaccordingtoIndian electricityrules(contd..)
	5 th	TUTORIAL
4 th	1 st	1.5-NecessityofstartersandrelaysforbothDCandACmachines.
	2 nd	1.5-NecessityofstartersandrelaysforbothDCandAC machines(contd..)
	3 rd	1.6-Testingbeforegivingsupplyandtestingreport.
	4 th	2.Installation,commissioningandTestingofTransformer. 2.1-Basicideaondispatch,inspection,storageandhandlingof transformer.
	5 th	TUTORIAL
5 th	1 st	2.1-Basicideaondispatch,inspection,storageandhandlingof transformer(contd..)
	2 nd	2.2-Civilconstructionfeatureregardingconnectionlikeventilation, noise level, space for free movement.
	3 rd	2.2-Civilconstructionfeatureregardingconnectionlikeventilation, noise level, space for free movement (contd..)
	4 th	2.2-Civilconstructionfeatureregardingconnectionlikeventilation, noise level, space for free movement(contd..)
	5 th	TUTORIAL
6 TH	1 st	2.3-Foundationanddrainageofoil.
	2 nd	2.4-Cablingandcableboxfortransformer.
	3 rd	2.5-Provisionforfireprotection.
	4 th	2.6-Provisionforbushingsupportlocationofswitchgear.
	5 th	TUTORIAL
7 TH	1 st	2.7-Stepsforcommissioningfittingofallaccessories.
	2 nd	2.8-Fillingofoil,dryingout.
	3 rd	2.9-Chargingthebreatherwithfreshsilicagel.
	4 th	2.10-Cleaningofbushing,fixingofconductor&cables,earthingof tank and cover, neutral earthing.
	5 th	TUTORIAL

8 TH	1 st	2.10-Cleaningofbushing,fixingofconductor&cables,earthingof tank and cover, neutral earthing(contd..)
	2 nd	2.11-Fixingofprotectioncircuitsandsettingofrelays.
	3 rd	3.Installation,commissioningandTestingofSubstation. 3.1-Designandplanningofindoorsubstation.
	4 th	3.2-Generalrequirementoflayoutofindoorsubstationwithkey diagram.
	5 th	TUTORIAL
9 TH	1 st	3.3-Considrationofsafeoperationofsubstation.
	2 nd	3.4-Instllationofoutdoorsubstation. 3.4.1-Selectionofsite,transport&receiptof transformer, cheking of insulation resistance of the winding, testing of transformer oil, protectionfittings,constructionofmounting,earthingarrangement & final commissioning.
	3 rd	3.4.1-Selectionofsite,transport&receiptoftransformer, cheking of insulation resistance of the winding, testing of transformer oil, protectionfittings,constructionofmounting,earthingarrangement & final commissioning(contd..)
	4 th	3.4.1-Selectionofsite,transport&receiptoftransformer, cheking of insulation resistance of the winding, testing of transformer oil, protectionfittings,constructionofmounting,earthingarrangement & final commissioning(contd..)
	5 th	TUTORIAL
10 TH	1 st	3.5-Testingandcommissioningofsubstation. 3.5.1-Installationofcontrolandrelaypanels.
	2 nd	3.5.2-Preliminarypreparation. 3.5.3-Sequencecardforerectionofswitchgearequipments.
	3 rd	3.5.4-Locationofplace. 3.5.5-Unpacking 3.5.6-Foundation.
	4 th	3.5.7- Erection.3.5.8- Relays.
	5 th	TUTORIAL
11 TH	1 st	3.6-Bus-barearthingconnection,earthing. 3.6.1-Connection to main cable.
	2 nd	3.6.2-Safetyprecaution.
	3 rd	3.7-Installationofoutdoorcircuitbreaker. 3.7.1-Receipt and storage.
	4 th	3.7.2-Civilworks. 3.7.3-Varioustepsforinstallation.
	5 th	TUTORIAL
12 TH	1 st	3.7.4-Pre-commissioningtests.
	2 nd	4.Maintenance. 4.1-Fundamentalofmaintenance.
	3 rd	4.2-Preventivemaintenanceandplanning.(Daily,weekly,monthly, Half-yearly & Yearly maintenance)
	4 th	4.2-Preventivemaintenanceandplanning.(Daily,weekly,monthly, Half-yearly & Yearly maintenance) (contd..)
	5 th	TUTORIAL
13 TH	1 st	4.2-Preventivemaintenanceandplanning.(Daily,weekly,monthly, Half-yearly & Yearly maintenance) (contd..) 4.3-Advantagesofpreventivemaintenance.
	2 nd	4.4-Breakdownmaintenance.Listoftools/Instruments&materials usedfor maintenance.
	3 rd	4.5-Making or preparing maintenance schedule of DC Machines,Synchronousmachines,Transformer,Transmissionline,Distri but ion lines,Undergroundcables,Circuitbreakers,Switchgear&protective relays& Substations,SF-6 circuit breakers,Batteries in substation.
	4 th	4.5-MakingorpreparingmaintenancescheduleofDCMachines, Synchronousmachines,Transformer,Transmissionline,Distribution lines,Undergroundcables,Circuitbreakers,Switchgear&protective

		relays&Substations,SF-6circuitbreakers,Batteriesinsubstation. (contd..)
	5 th	TUTORIAL
14 TH	1 st	4.5-Making or preparing maintenance schedule of DC Machines, Synchronousmachines,Transformer,Transmissionline,Distribution lines,Undergroundcables,Circuitbreakers,Switchgear&protective relays&Substations,SF-6circuitbreakers,Batteriesinsubstation. (contd..)
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	5 th	TUTORIAL