LessonPlan

Subject:ElectricalMeasurement&Instrumentation Semester: 4th

DiplomainElectricalEngineering

Sl.No.	Topicstobecovered	No.ofhours Required	Module	Modeof Teaching
1	DefineMeasurementandtypesofElectricalmeasuring instruments.	01	I	LM/IM
2	DefineAccuracy,precision,Errors,ResolutionsSensitivity,and tolerancewithdiscusstypesoferrors.	01	I	LM/IM
3	Explainaboutthedeflecting,controllinganddamping arrangementsinindicatingtypeofinstruments.	01	I	LM/IM
4	Calibrationofinstruments.	01	I	LM/IM/ICT
5	Describetheconstruction,principleofoperationofPMMC instruments.	01	II	LM/IM
6	SolvenumericalonPMMCinstruments.	01	II	LM/IM
7	Describetheconstruction,principleofoperationofMI instruments.	01	II	LM/IM
8	SolvenumericalonMIinstruments.	01	II	LM/IM/ICT
9	Extendtherangeofinstrumentsbyuseofshuntsand Multipliersandsolvenumericalonit.	01	II	LM/IM
10	Describe Construction, principle of working of LPF, UPF type Dynamometer type wattmeter.	01	III	LM/IM
11	TheErrorsinDynamometertypewattmeterandmethodsof theircorrection.	01	III	LM/IM
12	TwoDiscussInductiontypewattmeters.	01	III	LM/IM
13	Discuss on construction, working principle and their compensation&adjustmentsofSingle-PhaseInductiontype Energymeters.	01	III	LM/IM
14	TestingofEnergyMeters.	01	IV	LM/IM
15	SolvenumericalonEnergyMeters.	01	IV	LM/IM
16	IntroductiononTachometers,typesandworkingprinciples.	01	V	LM/IM
17	PrincipleofoperationandconstructionofMechanicaland ElectricalresonanceTypefrequencymeters.	01	V	LM/IM/ICT
18	PrincipleofoperationandworkingofDynamometertypesingle phaseandthreephasepower factormeters.	01	V	LM/IM
19	Measurementoflowresistancebypotentiometermethod.	01	VI	LM/IM/ICT
20	Measurementofmediumresistancebywheat Stonebridge method.	01	VI	LM/IM
21	Measurementofhighresistancebylossofchargemethod.	01	VI	LM/IM
22	Construction,principleofoperationsofMegger.	01	VI	LM/IM
23	Construction, principle of operations of Earth tester for insulationresistanceandearthresistancemeasurementand Multimeter.	01	VI	LM/IM

24	Introductionofvariousbridgesmethods.	01	VI	LM/IM
25	MeasurementofinductancebyMaxwell'sBridgemethod.	01	VI	LM/IM/ICT
26	MeasurementofcapacitancebyScheringBridgemethod.	01	VI	LM/IM
27	Solvenumericalondifferentbridgesmethods.	01	VI	LM/IM
28	DefineTransducer,sensingelementordetectorelementand transduction elements.	01	VI	LM/IM
29	Classificationofresistance	01	VI	LM/IM
30	Measurementoflowresistancebypotentiometermethod..	01	VII	LM/IM
31	Measurementofmediumresistancebywheatstonebridge method.	01	VII	LM/IM
32	Measurementofhighresistancebyloss ofchargemethod.	01	VII	LM/IM
33	Construction,principleofoperationsofMegger &Earthtester forinsulationresistanceandearth	01	VII	LM/IM
34	Deailsontheresistancemeasurement.	01	VII	LM/IM
35	ConstructionandprinciplesofMultimeter.(Analogand Digital)	01	VII	LM/IM
36	MeasurementofinductancebyMaxewell'sBridgemethod.	01	VII	LM/IM
37	MeasurementofcapacitancebyScheringBridgemethod	01	VII	LM/IM
38	Classificationofresistance	01	VII	LM/IM
39	Measurementoflowresistancebypotentiometermethod..	01	VII	LM/IM
40	.Measurementofmediumresistancebywheatstonebridge method.	01	VII	LM/IM
41	Measurementofhighresistancebylossofchargemethod.	01	VII	LM/IM
42	Construction,principleofoperationsofMegger &Earthtester forinsulationresistanceandearth	01	VII	LM/IM
43	Solvenumericalonit.	01	VII	LM/IM
44	ConstructionandprinciplesofMultimeter.(Analogand Digital)	01	VII	LM/IM
45	DerivationofinductancebyMaxewell'sBridgemethod.	01	VII	LM/IM
46	ConstructionworkingofcapacitancebyScheringBridge method	01	VII	LM/IM
47	Solvenumericalontheabovetopics.	01	VII	LM/IM
48	SolvenumericalonMeasurementoflowresistanceby potentiometermethod..	01	VII	LM/IM
49	SolvenumericalonMeasurementofmediumresistanceby wheatStonebridgemethod.	01	VII	LM/IM
50	SolvenumericalonMeasurementofinductancebyMaxewell's Bridgemethod.	01	VII	LM/IM
51	SolvenumericalonMeasurementofcapacitancebySchering Bridgemethod.	01	VII	LM/IM
52	DefineTransducer,sensingelementordetectorelementand transductionelements.	01	VIII	LM/IM

53	Classifytransducer.Giveexamplesofvariousclassof transducer.	01	VIII	LM/IM
54	ResistivetransducerandInductiveTransducer	01	VIII	LM/IM
55	Principleoflinearvariabledifferential Transformer(LVDT)	01	VIII	LM/IM
56	7.4.1PiezoelectricTransducerandHallEffectTransducer	01	VIII	LM/IM
57	PrincipleofoperationofCathodeRayTube.	01	VIII	LM/IM
58	PrincipleofoperationofOscilloscope(withhelpofblock diagram).	01	VIII	LM/IM
59	MeasurementofDCVoltage&current.	01	VIII	LM/IM
60	MeasurementofACVoltage,current,phase&frequency.	01	VIII	LM/IM