

GOVT.POLYTECHNICMAYURBHANJLESSONPLAN-2022/23(SUMMER)

Discipline: ELECTRICAL	Semester:6thSem	Name of the Teaching Faculty: C. R. Panda	
Subject:CSE	No.of Days/ Per week class allotted:05		
Unit	Topics	No of period required	
UNIT-1	1.FUNDAMENTAL OF CONTROL SYSTEM		
	Classification of Control system	1	
	Open loop system & Closed loop system and its comparison	1	
	Effects of Feedback	1	
	Standard test Signals (Step,Ramp,Parabolic,ImpulseFunctions)	1	
UNIT-2	2.MATHEMATICALMODELOFASYSTEM		
	Transfer Function & Impulse response,	1	
	Properties, Advantages & Disadvantages of Transfer Function	1	
	Poles & Zeroes of transfer Function	1	
	Simple problems of transfer function of network.	1	
	Mathematical modeling of Electrical Systems (R,L,C,Analogoussystem)	1	
	Solve numerical problems	1	
	CLASSTEST-1	1	
UNIT-3	3.CONTROLSYSTEMCOMPONENTS		
	ComponentsofControlSystem	1	
	Gyroscope, Synchros	1	
	Tachometer,DCservomotors	1	
	DOLOPURNIMA		
	DCservomotors	1	
	AcServomotors	1	
	QuestionDiscussion	1	
UNIT-4	4.BLOCKDIAGRAMALGEBRA &SIGNALFLOWGRAPHS		
	Definition:BasicElementsofBlockDiagram	1	
	CanonicalFormofClosedloopSystems	1	
	RulesforBlockdiagramreduction	1	

	ProcedureforofReductionofBlockDiagram	1
	SimpleProblemforequivalenttransferfunction	1
	BasicDefinitioninSignalFlow Graph&properties	1
	ConstructionofSignalFlow graphfromBlockdiagram	1
	Mason'sGain formula	1
	.SimpleproblemsinSignalflow graphfornetwork	1
	Solvingproblems	1
	RAMANAVAMI	
	Solvingproblems	1
	Solvingproblems	1
UNIT-5	5.TIMERESPONSEANALYSIS.	
	Timeresponseofcontrolsystem.StandardTestsignal	1
	Stepsignal,	1
	GOODFRIDAY	
	RampSignal,ParabolicSignal	1
	ImpulseSignal	1
	TimeResponseoffirstordersystemwith:Unitstepresponse	1
	TimeResponseoffirstordersystemwith:Unitimpulseresponse.	1
	MOHABISUBASANKRANTI	
	Timeresponseofsecondordersystemtotheunitstepinput.	1
	Derivationofexpressionforrisetime,peaktime,peakovershoot,settlingtimeandsteadystateerror.	1
	INTERNALEXAM	
	Steadystateerroranderrorconstants.	1
	Typesof controlsystem.[SteadystateerrorsinType-0, Type- 1,Type-2system]	1
	Effectofaddingpolesandzerototransferfunction.5.7ResponsewithP,PI,PDandPID	1
	EID-UL-FITAR	
	6.ANALYSISOFSTABILITYBYROOTLOCUSTECHNIQUE.	
Rootlocusconcept.	1	
Constructionofrootloci.	1	
Solvingproblems	1	
Rulesforconstructionoftherootlocus.	1	
EffectofaddingpolesandzerotoG(s)andH(s).	1	
Solvingproblems	1	
7.FREQUENCYRESPONSEANALYSIS.		
Correlationbetweentimeresponseandfrequency response.	1	
BUDDHAPURNIMA		

UNIT-7	Polarplots.	1
	Bodeplots.	1
	Allpassandminimumphasesystem.	1
	LightningarrestersandTypeoflightningArresters-Rod-gaplightningarrester.	1
	ComputationofGainmarginandphasemargin.	1
	Logmagnitudeversusphaseplot	1
	Closedloopfrequency response.	1
	QuestionDiscussion	1
	CLASSTEST-2	1
	SABITRIAMABASYA	
	8. NYQUISTPLOT	
UNIT-8	Nyquiststability criterion.	1
	Niquiststability criterionappliedtoinversepolarplot.	1
	QuestionDiscussion	1
	Assessmentofrelativestability.	1
	ConstantMandNcircle	1
	Nicholaschart.	1
	SemesterQuestionDiscussion	1