

GOVT. POLYTECHNIC MAYURBHANJ

LESSON PLAN

Discipline : MECHANICAL ENGG.		Semester: 5th Sem	Name of the Teaching Faculty :Satyajit Mohanta
Subject : HM&IFP		No. of Days / per week class allotted : 04	Semester From date : 01.10.2021 To Date : 08.01.2022
MONTH	Week	Day	Topics
OCTOBER	1st	5th	1.0 HYDRAULIC TURBINES -Introduction about hydraulic machine
		1st	Definition and classification of hydraulic turbines
	2nd	2nd	Construction and working principle of impulse turbine.
		5th	Velocity diagram of moving blades, work done and derivation of various efficiencies of impulse turbine.
	4th	5th	Velocity diagram of moving blades, work done and derivation of various efficiencies of Kaplan and francis turbine and distinguish between impulse turbine and reaction turbine and problem solve
	5th	1st	2.0 CENTRIFUGAL PUMPS -Defination and classification of pump
		2nd	Construction and working principle of centrifugal pumps
		3rd	work done and derivation of various efficiencies of centrifugal pumps
		5th	Problem solved
	NOVEMBER	1st	1st
2nd			3.0 RECIPROCATING PUMPS - Describe construction & working of single acting and double acting reciprocating pump
3rd			Derive the formula foe power required to drive the pump (Single acting & double acting)
5th			Problem solved
2nd		1st	State positive & negative slip & establish relation between slip & coefficient of discharge
		2nd	4.0 PNEUMATIC CONTROL SYSTEM -Introduction to pneumatic circuit
		3rd	Elements –filter-regulator-lubrication unit
3rd		5th	Pressure control valves
		1st	Pressure regulation valves
		2nd	Direction control valves
		3rd	3/2DCV,5/2 DCV,5/3DCV
		1st	Flow control valves,Throttle valves
	2nd	ISO Symbols of pneumatic components	

	4th	3rd	Pneumatic circuits	
		5th	Direct control of single acting cylinder	
	5th	1st	INTERNAL	
		2nd	Operation of double acting cylinder with metering in and metering out control	
DECEMBER	1st	3rd	5.0 HYDRAULIC CONTROL SYSTEM -Basic component of hydraulic system	
		5th	Hydraulic system, its merit and demerits	
	2nd	1st	Hydraulic accumulators	
		2nd	Pressure control valves,Pressure relief valves	
		3rd	Pressure regulation valves,Direction control valves	
		5th	3/2DCV,5/2 DCV,5/3DCV	
	3rd	1st	Flow control valves	
		2nd	Throttle valves	
		3rd	Fluid power pumps	
		5th	External and internal gear pumps	
	4th	1st	Vane pump,Radial piston pumps	
		2nd	ISO Symbols for hydraulic components.	
		3rd	Actuators	
		5th	Hydraulic circuits	
	5th	1st	Direct control of single acting cylinder	
		2nd	Operation of double acting cylinder	
		3rd	Operation of double acting cylinder with metering in and metering out control and Comparison of hydraulic and pneumatic system	
		5th	Comparison of hydraulic and pneumatic system	
	JANUARY	2nd	1st	Discussion of previous year question with answer
			2nd	Discussion of previous year question with answer
3rd			Discussion of previous year question with answer	
5th			CLASS TEST-2	

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