SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

Descipline: Mechanical	Semester: 5th	Name of the Teaching Faculty: S. I. Hasan.
Subject: HMIFP	No of Days/per week class allotted: 4	Semester from Date: 1.7.24 to Date: 18.11.24 No of Weeks:
Week	Class Day	Theory/Practical Topics
1st	1st	Introduction to hydraulic Turbines
	2nd	Classification of Hydraulic Turbines.
	3rd	Construction and working of Impulse Turbine
	4th	Velocity diagram of Moving blades
	5th	
2nd	1st	Workdone and Efficient of Turbine.
	2nd	Problem solving Impulse Turbine.
	3rd	Problem Solving Impulse Turbine.
	4th	Velocity diagram of moving blade Francis Turbine.
	5th	
3rd	1st	Francis turbine - Work done, Efficiency.
	2nd	Problem Solving
	3rd	Problem Solving.
	4th	Problem Solving.
	5th	
4th	1st	Kaplan Turbine - Workdone, Efficiency.
	2nd	Kaplan Turbine - velocity diagram
	3rd	Problem Solving.
	4th	Problem Solving.
	5th	
5th	1st	Reaction Turbine and Impulse Turbine. defining, difference
	2nd	Centrifugal Pump- Introduction.
	3rd	construction and working of Pump
	4th	Work done and efficiency.
	5th	

Sign of Faculty

HOD

Principal 22/12/24

SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

Descipline:	Semester: 5th	Name of the Teaching Faculty: S. L. Nayak
Subject: HMIFP	No of Days/per week class allotted:	Semester from Date: 1.7.24 to Date: 18.11.24 No of Weeks:
Week	Class Day	Theory/Practical Topics
1st to 6	1st	Problem on Centrifugal Pump
	2nd	Problem on Centrifugal Pump
	3rd	Problem on Centrifugal Pump.
	4th	Reciprocating Pump- Definition, diagram
	5th	
7 2nd	1st	Single Acting Reciprocating Pump - working
	2nd	Double Acting Reciprocating Pump - type
	3rd	Power Required Drive Pumps Formula
	4th	Slip of Pumps - definition, diagram
	5th	
8 3rd	1st	Problem on Single Acting R.P.
	2nd	Problem on Single Acting R.P.
	3rd	Problem on Double Acting R.P.
	4th	Problem on Double Acting R.P.
	5th	
9 4th	1st	Pneumatic Control - Definition, Construction
	2nd	Element of Pneumatic Control - Filter-Lubricator.
	3rd	Types of Pressure control Valve, Relief valve
	4th	Pressure Regulation valves.
	5th	
10 5th	1st	Direction Control valves - definition - Diagram.
	2nd	3/2 DCV valves, 5/2 DCV, 5/3 DCV.
	3rd	Flow control valve.
	4th	Throttle valves.
	5th	

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Principal

SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

Descipline:	Semester: 8th	Name of the Teaching Faculty: S.I. Mam
Subject: HMIFP	No of Days/per week class allotted:	Semester from Date: 1.7.24 to Date: 18.11.24 No of Weeks:
Week	Class Day	Theory/Practical Topics
(11) 1st	1st	Iso Symbol of Pneumatic Components
	2nd	Pneumatic Circuits of Sing acting Cylinder.
	3rd	Double Acting cylinder Direct control
	4th	Metering-In, Metering-out, double acting cylinder.
	5th	
2nd	1st	Hydraulic Control System - Advantage, disadvantage
	2nd	Hydraulic Accumulators.
	3rd	Pressure control valves.
	4th	Pressure Relief valve.
	5th	
3rd	1st	Pressure Regulation Valves.
	2nd	Direction control valve - Definition - Symbol
	3rd	3/2 DCV, 5/2 DCV, 5/3 DCV.
	4th	Flow control valves.
	5th	
4th	1st	Throttle valves.
	2nd	Fluid Power Pumps - Vane Pumps.
	3rd	External Gear pumps.
	4th	Radial Piston Pump.
	5th	
5th	1st	Iso Symbol of Hydraulic Component.
	2nd	Actuator
	3rd	Hydraulic Circuit - Direct control of single cylinder.
	4th	Double acting cylinder - Meter in - out
	5th	

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Principal 22/6/24

SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

Descipline:	Semester:	Name of the Teaching Faculty:
Subject: HMIFP	No of Days/per week class allotted:	Semester from Date: to Date: No of Weeks:
Week	Class Day	Theory/Practical Topics
(16) 1st	1st	Comparison of hydraulic / Pneumatic System.
	2nd	Semester Q and Ans.
	3rd	Semster Q and Ans.
	4th	Semeste Q and Ans.
	5th	
2nd	1st	
	2nd	
	3rd	
	4th	
	5th	
3rd	1st	
	2nd	
	3rd	
	4th	
	5th	
4th	1st	
	2nd	
	3rd	
	4th	
	5th	
5th	1st	
	2nd	
	3rd	
	4th	
	5th	

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Principal 22/6/21