

PNS SCHOOL OF ENGGINERING & TECHNOLOGY
LESSON PLAN

Discipline : Mechanical	Semester: 5TH	Name of the Teaching Faculty : RAMAKANT SWAIN
Subject : HM & IFP	No. of Days / per week class allotted : 6	Semester From date : 01.08.2023 to Date :30.11.2023 No. of Weesks : 12
Week	Class Day	Topics
1	1st	1.1 Definition and classification of hydraulic turbines
	2nd	Construction and working principle of impulse turbine
	3rd	3 Velocity diagram of moving blades, work done and derivation of
	4th	Velocity diagram of moving blades, work done and derivation of various efficiencies of Francis turbine
	5th	Revision
	6th	Revision
2	1st	Velocity diagram of moving blades, work done and derivation of
	2nd	Numerical on above
	3rd	Distinguish between impulse turbine and reaction turbine
	4th	Construction and working principle of centrifugal pumps
	5th	Revision
	6th	Revision
3	1st	work done and derivation of various efficiencies of centrifugal
	2nd	Numerical on above
	3rd	Describe construction & working of single acting reciprocating pump
	4th	Describe construction & working of double acting reciprocating pump
	5th	Revision
	6th	Revision
4	1st	Derive the formula foe power required to drive the pump (Single
	2nd	Define slip.
	3rd	State positive & negative slip & establish relation between slip & coefficient of discharge
	4th	Solve numerical on above
	6th	Revision
	6th	Revision
5	1st	Elements –filter-regulator-lubrication unit
	2nd	Pressure control valves
	3rd	Pressure relief valves
	4th	Pressure regulation valves
	5th	Revision
	6th	Revision
6	1st	Direction control valves
	2nd	3/2DCV,5/2 DCV,5/3DCV
	3rd	Flow control valves
	4th	Throttle valves
	5th	Revision
	6th	Revision

7	1st	ISO Symbols of pneumatic components
	2nd	Pneumatic circuits
	3rd	Direct control of single acting cylinder
	4th	Operation of double acting cylinder
	5th	Revision
	6th	Revision
8	1st	Operation of double acting cylinder with metering in and metering out control
	2nd	HYDRAULIC CONTROL SYSTEM
	3rd	Hydraulic system, its merit and demerits
	4th	Hydraulic accumulators
	5th	Revision
9	6th	Revision
	1st	Pressure control valves
	2nd	Pressure relief valves
	3rd	Pressure regulation valves
	4th	Direction control valves
	5th	Revision
	6th	Revision
10	1st	3/2DCV,5/2 DCV,5/3DCV
	2nd	Flow control valves
	3rd	Throttle valves
	4th	Fluid power pumps
	5th	Revision
	6th	Revision
11	1st	External and internal gear pumps
	2nd	Vane pump
	3rd	Radial piston pumps
	4th	ISO Symbols for hydraulic components
	5th	Revision
	6th	Revision
12	1st	Actuators
	2nd	Hydraulic circuits
	3rd	Direct control of single acting cylinder
	4th	Operation of double acting cylinder

Signature of HOD, Mechanical

Signature of Lecturer