SYNERGY SCHOOL OF ENGINEERING, Dhenkanl

LESSION PLAN

Discipline: Mechanical Engg	Semester: 5th Sem Mech	Name of faculty: Mihir kumar swain		
Sub: HM&IFP	No of Days/ week class allotted :- 4	Total no of weeks:- 15 Session: 2023-24 (W)		Start date 01|8|23 End date 02|10|23

No of Week	Class day	Topic to be taught (Theory)
1st	1st	Definition and classification of hydraulic turbines , Construction and working principle of impulse turbine.
	2nd	Velocity diagram of moving blades
	3rd	work done and derivation of various efficiencies of impulse turbine.
	4th	Solve numericals
2nd	1st	Solve numericals
	2nd	Solve numericals
	3rd	Construction and working principle of francis turbine.
	4th	Velocity diagram , work done and derivation of various efficiencies of Francis turbine
3rd	1st	Solve numericals
	2nd	Solve numericals
	3rd	Solve numericals
	4th	Construction and working principle of kaplan turbine.
4th	1st	Velocity diagram , work done and derivation of various efficiencies of kaplan turbine
	2nd	Solve numericals
	3rd	Solve numericals
	4th	Solve numericals
5th	1st	Distinguish between impulse turbine and reaction turbine.
	2nd	Construction and working principle of centrifugal pumps
	3rd	work done and derivation of various efficiencies of centrifugal pumps.
	4th	Solve numericals
6th	1st	Solve numericals
	2nd	Solve numericals
	3rd	Solve numericals
	4th	Describe construction & working of single acting reciprocating pump.
7th	1st	Describe construction & working of double acting reciprocating pump.
	2nd	Derive the formula for power required to drive the pump (Single acting & double acting)
	3rd	Define slip. State positive & negative slip & establish relation between slip & coefficient of discharge
	4th	Solve numerical
8th	1st	Solve numerical

	2nd	Solve numerical
	3rd	Monthly test-1
	4th	Introduction to pneumatic control system, 1Elements –filter-regulator-lubrication unit
9th	1st	Pressure control valves , Pressure relief valves , Pressure regulation valves
	2nd	Direction control valves , 3/2 DCV
	3rd	5/2 DCV,5/3DCV
	4th	Flow control valves , Throttle valves
10th	1st	ISO Symbols of pneumatic components
	2nd	Direct control of single acting cylinder
	3rd	Operation of double acting cylinder in pneumatic circuits
	4th	Operation of double acting cylinder with metering in and metering out control
11th	1st	Hydraulic system, its merit and demerits
	2nd	Hydraulic accumulators
	3rd	Pressure control valves , Pressure relief valves , Pressure regulation valves
	4th	3/2DCV,5/2 DCV,5/3DCV
12th	1st	Flow control valves , Throttle valves
	2nd	External and internal gear pumps
	3rd	Vane pump , Radial piston pumps
	4th	ISO Symbols for hydraulic components.
13th	1st	Actuators
	2nd	Direct control of single acting cylinder
	3rd	Operation of double acting cylinder
	4th	Operation of double acting cylinder with metering in and metering out control
14th	1st	Comparison of hydraulic and pneumatic system
	2nd	Monthly test-2
	3rd	Previous year questions & answers discussion
	4th	Previous year questions & answers discussion
15th	1st	Previous year questions & answers discussion
	2nd	Previous year questions & answers discussion
	3rd	Previous year questions & answers discussion
	4th	Previous year questions & answers discussion

MkSxai'
24/7/23

Prepared by:

24/07/2023
H.O.D