Discipline:- Mechanical Engg.	Semester:- 5th	Name of the Teaching Faculty: Er. RAMAKANTA NAYAK	
Subject:- HYDRAULIC MACHINES &INDUSTRIAL FLUID POWER	No. Of days/week class allotted -04	Semester from: 01.08.2023 To: 30.11.2023	
		No. Of weeks:- 15	
Week	No. Of Period	Theory Topics	
01.08.2023 TO 05.08.2023	1st	Definition and classification of hydraulic turbines	
	2nd	Construction and working principle of impulseturbine.	
	3rd	Velocity diagram of moving blades, work done of impulse turbine(pelton wheel)	
	4th	Derivation of various efficiencies of impulse turbine (pelton wheel)	
07.08.2023 To 12.08.2023	1st	Numerical on pelton wheel	
	2nd	Numerical on pelton wheel	
	3rd	Construction and Velocity diagram of moving blades of Francis turbine	
	4th	Work done andderivation of various efficiencies of Francis turbine.	
	5th	Numerical on Francis turbine	
14.08.2023 To 19.08.2023	1st	Numerical on Francis turbine	
	2nd	Construction and Velocity diagram of moving blades of Kaplan turbine.	
	3rd	Work done and derivation of various efficiencies of Kaplan turbine	
	4th	Numerical on Kaplan turbine	
	5th	Numerical on Kaplan turbine	
21.08.2023 To 26.08.2023	1st	Distinguish between impulse turbine and reactionturbine.	
	2nd	Discussion about important question on the hydraulic turbines	
	3rd	Construction and working principle of centrifugal pumps	
	4th	Work done and derivation of various efficiencies of centrifugal pumps	
	5th	Numerical on above	

week	No. Of period	Theory Topics
28.08.2023 To 02.09.2023	1st	Numerical on above of centrifugal pump
	2nd	**RAKSHA BANDHAN**
	3rd	Describe construction & working of single acting reciprocating pump.
	4th	Continue of previous topic
	5th	Describe construction & working of double acting reciprocating pump
04.09.2023 To 09.09.2023	1st	Continue
	2nd	**JANMASTAMI**
	3rd	Derive the formula foe power required to drive the pump (Single acting & double acting)
	4th	Numerical on the single & double acting reciprocating pump
	5th	Define slip, State positive& negative slip amp
11.09.2023 To 16.09.2023	1st	Establish relation between slip & coefficient of discharge.
	2nd	Solve numerical on above
	3rd	Pressure control valves 1. Pressure relief valves
	4th	Pressure regulation valves continue
	5th	Direction control valves . 1 .3/2DCV,5/2 DCV,5/3DCV,
18.09.2023 To 23.09.2023	1st	Flow control valves of direction control valves Throttle valves.
	2nd	**NUAKHAI**
	3rd	ISO Symbols of pneumatic components
	4th	Pneumatic circuits Direct control of single acting cylinder
	5th	Numerical on above
25.09.2023 To 30.09.2023	1st	Operation of double acting cylinder
	2nd	Operation of double acting cylinder with metering in and metering out control
	3rd	Hydraulic system, its merit and demerits
	4th	**BIRTHDAY OF MAHOMMAD**
	5th	Hydraulic accumulators - Pressure control valves

Week	No. Of period	Theory Topics
02.10.2023 To 07.10.2023	1st	**GANDHI JAYANTI**
	2nd	Pressure relief valves
	3rd	Fluid power pumps
	4th	External and internal gear pumps
	5th	Discussion about turbines numericals
09.10.2023 To 14.10.2023	1st	Vane pump
	2nd	Radial piston pump
	3rd	ISO Symbols for hydraulic components.
	4th	Actuators, discussion of previous chapter
	5th	**MAHALAYA**
16.10.2023 To 21.10.2023	1st	Pressure regulation valves Discussion of important question
	2nd	Discussion about pumps
	3rd	Direction control valves 1.3/2DCV,5/2 DCV,5/3DCV
	4th	Continues..
	5th	Flow control valves
23.10.2023 To 28.10.2023		**Durga puja holiday**
30.10.2023 To 04.11.2023	1st	Throttle valves
	2nd	Hydraulic circuits Direct control of single acting cylinder
	3rd	Operation of double acting cylinder
	4th	Discussion of previous year long question on pump
	5th	Discussion about Reciprocating pump

week	No. Of period	Theory Topics
06.11.2023 To 11.11.2023	1st	Operation of double acting cylinder with metering inand metering out control
	2nd	Revision of fluid power pump
	3rd	Class test on hydraulic turbines
	4th	Discussion of theoretical question on hydraulic turbines
	5th	Discussion of important question
13.11.2023 To 18.11.2023	1st	Describe the various types of pneumatic circuits
	2nd	Revision of Hydraulic accumulator
	3rd	Discussion of various types of question on pelton wheel
	4th	Revision on velocity diagram of impulse turbine
	5th	Numerical on pelton wheel
20.11.2023 To 25.11.2023	1st	Revision on velocity diagram of Francis turbine.
	2nd	Numerical on velocity diagram of Francis turbine.
	3rd	Revision on velocity diagram of Kaplan turbine.
	4th	Numericals on velocity diagram of Kaplan turbine.
	5th	Comparison of hydraulic and pneumatic system
27.11.2023 To 30.11.2023	1st	**RAHAS PURNIMA**
	2nd	Discuss the long type of theory previous year asked question
	3rd	Discuss the long type of theory previous year asked question