M.A 5th
HMIFP

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH

LESSON PLAN

Session-2023-2024

Discipline: Mechanical Engineering Engg. Semester: 5th.

Subject: HMIFP

Name of the Teaching Faculty: Yadabanand Sambit Barik

Subject: HMIFP No. of Days/per week class allotted 04

Semester From Date: 1.8.2023 To Date: 30.11.2023 No. of Weeks: 15

Week	Class Day	Theory /Practical Topics
1	1	Hydraulic Turbines –
	2	Definition, Classification
	3	Impulse turbine –
	4	Construction & working.
2	5	Velocity diagram, Work done of Impulse turbine
	6	Francis turbines.
	7	Kaplan turbines.
	8	Velocity diagram, work done – Francis turbine
3	9	Velocity diagram, work done. Kaplan turbine
	10	Simple problems.
	11	Distinguish between Impulse turbine & Reaction turbine
	12	Centrifugal pump.

Yadabanand Sahit Rank

Signature of the Faculty

Subject: HMFP No. of Days/per week class allotted 04

Semester From Date : 1.8.23 To Date : 30.11.23 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
4	13	Construction of centrifugal pump
	14	Working of centrifugal pump.
	15	Work done
	16	Efficiencies of centrifugal pump.
5	17	Numerical problems.
	18	Reciprocating pump -
	19	Single acting reciprocating pump.
	20	Construction & amp, working.
6	21	Double acting reciprocating pump
	22	Construction & working.
	23	Power required to drive the pump
	24	Power for angle acting pump

Yadabanand Gubil Barik

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Subject: HMIFP No. of Days/per week class allotted 03

Semester From Date : 1.8.23 To Date : 30.11.23 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
7	25	Power - Double acting pump.
	26	Slip.
	27	Positive slip
	28	Negative slip
8	29	Relation betw^n positive & negative slip.
	30	Solve numerical problems.
	31	Pneumatic control system
	32	Elements - filter, Regulator, lubrication.
9	33	Pressure control valves
	34	pressure release valve
	35	Pressure regulation valve
	36	Direction control valve.

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Subject: HMIFP No. of Days/per week class allotted 4

Semester From Date : 1.8.23 To Date : 30.11.23 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
10	37	ISO Symbols of pneumatic components.
	38	Pneumatic circuits.
	39	Direct control of single acting cylinder.
	40	Operation of double acting cylinder.
11	41	Metering in & metering out control.
	42	Hydraulic control system
	43	Hydraulic system - merit & demerits
	44	Hydraulic accumulators -
12	45	Pressure control valve
	46	Pressure relief valve
	47	Pr. regulation valve.
	48	Direction control valve.

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Subject: HMIFP No. of Days/per week class allotted 04

Semester From Date : 1.8.23 To Date : 30.11.23 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
13	49	Flow control valve
	50	Throttle valve.
	51	fluid power pumps –
	52	External & Internal gear pump.
14	53	Vane pump
	54	Radial piston pump.
	55	Iso symbol for hydraulic components.
	56	Actuators.
15	57	Hydraulic circuits.- Single acting cylinder
	58	Double acting.
	59	Metering in & metering out control
	60	Comparision of hydraulic & pneumatic system

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