GOVERNMENT POLYTECHNIC JAJPUR

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DEPARTMENT OF MECHANICAL ENGINEERING LESSION PLAN (2023-24)

Discipline: Mechanical Ingg.	Semester: 5th	Name of the Teaching faculty: Kedarnath Jena
Subject: HM&IFP LAB (PR-2)	No of Days/Week class alloted:4	Semester starts from Date: 01/08/2023 To 31/11/2023 No of weeks: 15
Week	Class Day	Topics
	1st (2p), Gr-1	Performance test on impulse turbine and to find out the effiency
		(i) Aim of the exp. Theory of pelton wheel turbine and find out the efficiency.
		(ii) Details of turbine parts, machine handling and procedure.
	2nd(2p), Gr-1	Performance test on impulse turbine and to find out the effiency
1st		(i) Test for efficiency, Calculation, performance curve and.
151	3rd (2p), Gr-2	Performance test on impulse turbine and to find out the effiency
		(i) Aim of the exp. Theory of pelton wheel turbine and find out the efficiency.
		(ii) Details of turbine parts, machine handling and procedure.
	4th(2p), Gr-2	Performance test on impulse turbine and to find out the effiency
		(i) Test for efficiency, Calculation, performance curve.
	1.1/2.) 0.1	Performance test on impulse turbine and to find out the effiency
	1st(2p), Gr-1	(i) Record check and Viva.
	2nd(2p), Gr-1	Performance test on impulse Kaplan and to find out the effiency
		(i) Aim of the exp. Theory of Kaplan turbine.
2-4		(ii) Details of turbine parts, machine handling and procedure through videos.
2nd	3rd(2p), Gr-2	Performance test on impulse turbine and to find out the effiency
		(i) Record check and Viva.
		Performance test on kaplan turbine and to find out the effiency
	4th(2p), Gr-2	(i) Aim of the exp. Theory of Kaplan turbine.
		(ii) Details of turbine parts, machine handling and procedure through videos.
	1st(2p), Gr-1	Performance test on kaplan turbine and to find out the effiency
		(i) Record check and Viva.
	2nd(2p), Gr-1	Performance test on Francis Turbine and find out the efficiency.
3rd		(i) Aim of the exp. Theory of Francis turbine and find out the efficiency.
		(ii) Details of turbine parts, machine handling and procedure.
Siu	3rd(2p), Gr-2	Performance test on kaplan turbine and to find out the effiency
	3rd(2p), Gr-2	(i) Record check and Viva.
	4th(2p), Gr-2	Performance test on Francis Turbine and find out the efficiency.
		(i) Aim of the exp. Theory of Francis turbine and find out the efficiency.
		(ii) Details of turbine parts, machine handling and procedure.
	1st(2p), Gr-1	Performance test on Francis Turbine and find out the efficiency.
		(i) Test for efficiency, Calculation, performance curve.
	2nd(2p), Gr-1	Performance test on Francis Turbine and find out the efficiency.
4th		(i) Record check and Viva.
401	3rd(2p), Gr-2	Performance test on Francis Turbine and find out the efficiency.
		(i) Test for efficiency, Calculation, performance curve.
	4th(2p), Gr-2	Performance test on Francis Turbine and find out the efficiency.
		(i) Record check and Viva.

		Performance test on centrifugal pump and find out the characteristic curves.
	1st(2p), Gr-1	(i) Aim of the exp. Theory of centrifugal pump and characteristic curve.
5th		(ii) Details of pump parts, machine handling and procedure to take reading.
	Carana	Performance test on centrifugal pump and find out the characteristic curves.
	2nd(2p), Gr-1	Record check and viva.
		Performance test on centrifugal pump and find out the characteristic curves.
	3rd(2p), Gr-2	(i) Aim of the exp. Theory of centrifugal pump and characteristic curve.
	Siu(zp), Gr-Z	(ii) Details of pump parts, machine handling and procedure to take reading.
		Performance test on centrifugal pump and find out the characteristic curves.
		Record check and viva.
		Direct operation of single & double acting pneumatic cylinder.
	1-4(2-) 6- 1	
		i) Aim of the experiment.
		ii) Video animations showing how valve works.
		Direct operation of single & double acting pneumatic cylinder.
	2nd(2p), Gr-1	i) Operating single and double acting pneumatic cylinders in pneumatic trainer.
6th		ii) Circuit connection through valves.
0		Direct operation of single & double acting pneumatic cylinder.
		i) Aim of the experiment.
		ii) Video animations showing how valve works.
		Direct operation of single & double acting pneumatic cylinder.
	4th(2p), Gr-2	i) Operating single and double acting pneumatic cylinders in pneumatic trainer.
		ii) Circuit connection through valves.
	4.12.) 6.4	Direct operation of single & double acting pneumatic cylinder.
	1st(2p), Gr-1	Record check and viva.
	4	Speed control double acting pneumatic cylinder using metering in and metering out circcuits.
	2nd(2p), Gr-1	i) Aim of the experiment.
		ii) Video animation metering in and metering out circuits.
		iii) Operating cylinders through metering in and metering out circuits in pneumatic train
7th		Direct operation of single & double acting pneumatic cylinder.
	3rd(2p), Gr-2	Record check and viva.
	7	Speed control double acting pneumatic cylinder using metering in and metering out
	4th(2p), Gr-2	circcuits.
		i) Aim of the experiment.
		ii) Video animation metering in and metering out circuits.
		iii) Operating cylinders through metering in and metering out circuits in pneumatic train
	30 00 00 00 00 00 00 00 00 00 00 00 00 0	Speed control double acting pneumatic cylinder using metering in and metering out
	1st(2p), Gr-1	네트를 가고 있다면 살아보다 하는데 어느 보았다면 나는데 하는데 그는 사람들이 살아 하는데
		i) Circuit connections through metering in & metering out valves.
	2nd(2p), Gr-1	Speed control double acting pneumatic cylinder using metering in and metering out circcuits.
		i) record check and viva.
8th	3rd(2p), Gr-2	Speed control double acting pneumatic cylinder using metering in and metering out circcuits.
		i) Circuit connections through metering in & metering out valves.
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	4th(2p), Gr-2	Speed control double acting pneumatic cylinder using metering in and metering out
	4th(2p), Gr-2	circcuits.

	1	Direct eneration of single and double acting budge discullated
9th	1st(2p), Gr-1	Direct operation of single and double acting hydrauliccylinder.
		i) Aim of the experiment.
		ii) Video animation showing hoe hydraulic valves works.
	2nd(2p), Gr-1	Direct operation of single and double acting hydrauliccylinder.
		i) Operating single and double acting hydraulic cylinder in hydraulic trainer.
	3rd(2p), Gr-2	Direct operation of single and double acting hydrauliccylinder.
		i) Aim of the experiment.
		ii) Video animation showing hoe hydraulic valves works.
	4th(2p), Gr-2	Direct operation of single and double acting hydraulic cylinder.
		i) Operating single and double acting hydraulic cylinder in hydraulic trainer.
	1st(2p), Gr-1	Direct operation of single and double acting hydraulic cylinder.
		i) Circuit connection through valves.
		ii) Record check and viva.
	2nd(2p), Gr-1	Direct operation of hydraulic motor.
		i) Aim of the experiment.
1046		ii) Video animation showing how hydraulic motor works.
10th		Direct operation of single and double acting hydraulic cylinder.
	3rd(2p), Gr-2	i) Circuit connection through valves.
		ii) Record check and viva.
		Direct operation of hydraulic motor.
	4th(2p), Gr-2	i) Aim of the experiment.
		ii) Video animation showing how hydraulic motor works.
		Direct operation of hydraulic motor.
	1st(2p), Gr-1	
		ii) Circuit connection through various valves.
		Direct operation of hydraulic motor.
	2nd(2p), Gr-1	i) record check and viva.
11th		Direct operation of hydraulic motor.
	3rd(2p), Gr-2	i) Operating single & double acting hydraulic cylinders in hydraulic trainer.
	Sid(2p), Gi 2	ii) Circuit connection through various valves.
		Direct operation of hydraulic motor.
	4th(2p), Gr-2	i) record check and viva.
		Speed control double acting hydraulic cylinder using metering in and metering out
		circcuits.
	1st(2p), Gr-1	i) Aim of the experiment.
12th		ii) Video animations showing metering in & metering out circuits.
	2nd(2p), Gr-1	Speed control double acting hydraulic cylinder using metering in and metering out
		circcuits.
		i) Operating cylinders through metering in & metering out circiuts in trainer.
		ii) Circuit connections through valves.
	3rd(2p), Gr-2	Speed control double acting hydraulic cylinder using metering in and metering out
		circcuits.
		i) Aim of the experiment.
		ii) Video animations showing metering in & metering out circuits.
		Speed control double acting hydraulic cylinder using metering in and metering out
	4th(2p), Gr-2	circcuits.
		i) Operating cylinders through metering in & metering out circiuts in trainer.
		ii) Circuit connections through valves.
		Speed control double acting hydraulic cylinder using metering in and metering out
		circcuits.
	1st(2p), Gr-1	i) Record check & viva.

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13th	2nd(2p), Gr-1	Double clearing, remedial and left out practicals
	3rd(2p), Gr-2	Speed control double acting hydraulic cylinder using metering in and metering out
		circcuits.
		i) Record check & viva.
	4th(2p), Gr-2	Double clearing, remedial and left out practicals
14th	1st(2p), Gr-1	Double clearing, remedial and left out practicals
	2nd(2p), Gr-1	Double clearing, remedial and left out practicals
	3rd(2p), Gr-2	Double clearing, remedial and left out practicals
	4th(2p), Gr-2	Double clearing, remedial and left out practicals
15th	1st(2p), Gr-1	Double clearing, remedial and left out practicals
	2nd(2p), Gr-1	Viva on overall.
	3rd(2p), Gr-2	Double clearing, remedial and left out practicals
	4th(2p), Gr-2	Viva on overall.
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