

GOVERNMENT POLYTECHNIC JAJPUR

At/ Po: Ragadi, Block: Korei, Dist.: Jajpur, Odisha- 755019

Website: <https://www.gpjajpur.org> E-mail: principalgpjajpur@yahoo.co.in Contact: 9437155107

DEPARTMENT OF MECHANICAL ENGINEERING

LESSION PLAN (2023-24)

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

5th	1st(2p), Gr-1	Performance test on centrifugal pump and find out the characteristic curves.
		(i) Aim of the exp. Theory of centrifugal pump and characteristic curve.
		(ii) Details of pump parts, machine handling and procedure to take reading.
	2nd(2p), Gr-1	Performance test on centrifugal pump and find out the characteristic curves.
		Record check and viva.
	3rd(2p), Gr-2	Performance test on centrifugal pump and find out the characteristic curves.
		(i) Aim of the exp. Theory of centrifugal pump and characteristic curve.
		(ii) Details of pump parts, machine handling and procedure to take reading.
4th(2p), Gr-2	Performance test on centrifugal pump and find out the characteristic curves.	
	Record check and viva.	
6th	1st(2p), Gr-1	Direct operation of single & double acting pneumatic cylinder.
		i) Aim of the experiment.
		ii) Video animations showing how valve works.
	2nd(2p), Gr-1	Direct operation of single & double acting pneumatic cylinder.
		i) Operating single and double acting pneumatic cylinders in pneumatic trainer.
		ii) Circuit connection through valves.
	3rd(2p), Gr-2	Direct operation of single & double acting pneumatic cylinder.
		i) Aim of the experiment.
		ii) Video animations showing how valve works.
	4th(2p), Gr-2	Direct operation of single & double acting pneumatic cylinder.
		i) Operating single and double acting pneumatic cylinders in pneumatic trainer.
		ii) Circuit connection through valves.
7th	1st(2p), Gr-1	Direct operation of single & double acting pneumatic cylinder.
		Record check and viva.
	2nd(2p), Gr-1	Speed control double acting pneumatic cylinder using metering in and metering out circuits.
		i) Aim of the experiment.
		ii) Video animation metering in and metering out circuits.
	3rd(2p), Gr-2	Direct operation of single & double acting pneumatic cylinder.
		Record check and viva.
		Speed control double acting pneumatic cylinder using metering in and metering out circuits.
	4th(2p), Gr-2	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 trainer.
	8th	1st(2p), Gr-1
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 circuits.
		i) record check and viva.
3rd(2p), Gr-2		Speed control double acting pneumatic cylinder using metering in and metering out circuits.
		i) Circuit connections through metering in & metering out valves.
4th(2p), Gr-2		Speed control double acting pneumatic cylinder using metering in and metering out circuits.
		i) record check and viva.

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

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 circuits.
		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.

Sign. of Faculty

VNC
31/07/23