GOVERNMENT POLYTECHNIC JAJPUR

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

DEPARTMENT OF MECHANICAL ENGINEERING LESSION PLAN

Mechanical	Semester: 5th	Name of the Teaching: Suprava Be	hera
Subject: HM&IFP LAB	No of Days/Week class alloted:4	Semester starts from Date: 15/09/2022 To 22/12/2022	No of weeks: 15
Week	Class Day	Topics	
	1st (2p), Gr-1	Performance test on impulse turbine and to find out the efficiency	
1st		(i) Aim of the exp. Theory of Impulse turbine and working principle	
		(ii) Details of turbine parts, machine handling and procedure.	
	2nd(2p), Gr-2	Performance test on impulse turbine and to find out the efficiency	
		(i) Aim of the exp. Theory of Impulse turbine and working principle	
		(ii) Details of turbine parts, machine handling and procedure.	
	3rd (2p), Gr-1	Performance test on impulse turbine and to find out the efficiency	
		(i) Test for efficiency, Calculation, performance curve.	
	4th(2p), Gr-2	Performance test on impulse turbine and to find out the efficiency	
		(i) Test for efficiency, Calculation, performance curve.	
	1-4/2-1 6-1	Performance test on impulse turbine and to find out the efficiency	
	1st(2p), Gr-1	(i) Record check and Viva.	
	2nd(2p), Gr-2	Performance test on impulse turbine and to find out the efficiency	
	211d(2p), d1-2	(i) Record check and Viva.	
2nd		Performance test on Kaplan turbine and to find out the efficiency	
ZIIU	3rd(2p), Gr-1	(i) Aim of the exp. Theory of Kaplan turbine and working principle	
		(ii) Details of turbine parts, machine handling and procedure.	
		Performance test on Kaplan turbine and to find out the efficiency	
	4th(2p), Gr-2	(i) Aim of the exp. Theory of Kaplan turbine and working principle	
		(ii) Details of turbine parts, machine handling and procedure.	
	1st(2p), Gr-1 2nd(2p), Gr-2	Performance test on Kaplan turbine and to find out the efficiency	
3rd		(i) Test for efficiency, Calculation, performance curve.	
		Performance test on Kaplan turbine and to find out the efficiency	
		(i) Test for efficiency, Calculation, performance curve.	
	3rd(2p), Gr-1 4th(2p), Gr-2	Performance test on Kaplan turbine and to find out the efficiency	
		(i) Record check and Viva.	
		Performance test on Kaplan turbine and to find out the efficiency	
		(i) Record check and Viva.	
		Performance test on Francis turbine and to find out the efficiency	
	1st(2p), Gr-1	(i) Aim of the exp. Theory of Francis turbine and working principle	
		(ii) Details of turbine parts, machine handling and procedure. Performance test on Francis turbine and to find out the efficiency	
	24/2\ 02	(i) Aim of the exp. Theory of Francis turbine and working principle	
4th	2nd(2p), Gr-2	(ii) Details of turbine parts, machine handling and procedure.	
		Performance test on Francis turbine and to find out the efficiency	
	3rd(2p), Gr-1	(i) Test for efficiency, Calculation, performance curve.	
		Performance test on Francis turbine and to find out the efficiency	
	4th(2p), Gr-2	(i) Test for efficiency, Calculation, performance curve.	
		Performance test on Francis turbine and to find out the efficiency	
	1st(2p), Gr-1	(i) Record check and Viva.	
	2nd(2p), Gr-2	Performance test on Francis turbine and to find out the efficiency	
		(i) Record check and Viva.	
5th	3rd(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 rea	

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		Performance test on centrifugal pump and find out the characteristic curves.
	4th(2p), Gr-2	(i) Aim of the exp. Theory of centrifugal pump and characteristic curve.
		(ii) Details of pump parts, machine handling and procedure to take reading.
6th	1st(2p), Gr-1	Performance test on centrifugal pump and find out the characteristic curves.
		(i) Test for efficiency, Calculation, chracteristics curve.
	2nd(2p), Gr-2	Performance test on centrifugal pump and find out the characteristic curves.
	211u(2p), G1-2	(i) Test for efficiency, Calculation, chracteristics curve.
	3rd(2p), Gr-1	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) Aim of the experiment.
		ii) Video animations showing how valve works.
	1st(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.
	2nd(2p), Gr-2	Direct operation of single & double acting pneumatic cylinder.
		i) Operating single and double acting pneumatic cylinders in pneumatic trainer.
7th		ii) Circuit connection through valves.
		Direct operation of single & double acting pneumatic cylinder.
	3rd(2p), Gr-1	Record check and viva.
		Direct operation of single & double acting pneumatic cylinder.
	4th(2p), Gr-2	Record check and viva.
		Operating double acting pneumatic cylinder with quick exhaust valve
	1st(2p), Gr-1	i) Aim of the experiment.
		ii) Video animation showing how pneumatic cylinder works.
		Operating double acting pneumatic cylinder with quick exhaust valve
	2nd(2p), Gr-2	operating double acting pheumatic cylinder with quick exhaust valve
		i) Aim of the experiment.
8th		ii) Video animation showing how pneumatic cylinder works.
OUI	3rd(2p), Gr-1	Operating double acting pneumatic cylinder with quick exhaust valve
		i) Operating double acting pneumatic cylinders with quick exhaust valve in pneumatic trainer.
		Operating double acting pneumatic cylinder with quick exhaust valve
	4th(2p), Gr-2	i) Operating double acting pneumatic cylinders with quick exhaust valve in pneumatic trainer.
		ii) Circuit connection through valves.
	1st(2p), Gr-1 2nd(2p), Gr-2	Operating double acting pneumatic cylinder with quick exhaust valve
		i) record check and viva.
		Operating double acting pneumatic cylinder with quick exhaust valve
		i) record check and viva.
		Speed control double acting pneumatic cylinder using metering in and metering out circcuits.
9th	3rd(2p), Gr-1	i) Aim of the experiment.
		ii) Video animation showing metering in and metering out circcuits.
		ii) Operating cylinders through metering in and metering out circcuits.
	4th(2p), Gr-2	
		Speed control double acting pneumatic cylinder using metering in and metering out circcuits.
		i) Aim of the experiment.
		ii) Video animation showing metering in and metering out circcuits.
		ii) Operating cylinders through metering in and metering out circcuits.
	1st(2p), Gr-1	
		Speed control double acting pneumatic cylinder using metering in and metering out circcuits.
		i) Circuit connection through metering in and metering out circcuits.
	2nd(2p), Gr-2	Speed control double acting pneumatic cylinder using metering in and metering out circcuits.
10+h		i) Circuit connection through metering in and metering out circcuits.

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	3rd(2p), Gr-1	Speed control double acting pneumatic cylinder using metering in and metering out circcuits.	
		i) Record check and viva.	
4th(2p), G		Speed control double acting pneumatic cylinder using metering in and metering out circcuits.	
		i) Record check and viva.	
11th		Direct operation of single and double acting hydraulic cylinder.	
	1st(2p), Gr-1	i) Operating single & double acting hydraulic cylinders in hydraulic trainer.	
		ii) Circuit connection through various valves.	
	2nd(2p), Gr-2	Direct operation of single and double acting hydraulic cylinder.	
		i) Operating single & double acting hydraulic cylinders in hydraulic trainer.	
		ii) Circuit connection through various valves.	
	3rd(2p), Gr-1 4th(2p), Gr-2	Direct operation of single and double acting hydraulic cylinder.	
		i) record check and viva.	
		Direct operation of single and double acting hydraulic cylinder.	
		i) record check and viva.	
	4-4(20) 60 4	Direct operation of hydraulic motor.	
	1st(2p), Gr-1	i) Operating hydraulic motor in hydraulic trainer.	
		ii) Circuit connection through various valves.	
		Direct operation of hydraulic motor.	
12th	2nd(2p), Gr-2	i) Operating hydraulic motor in hydraulic trainer.	
		ii) Circuit connection through various valves.	
	3rd(2p), Gr-1	Direct operation of hydraulic motor.	
	515(- p _H 51 -	i) record check and viva.	
	4th(2p), Gr-2	Direct operation of hydraulic motor.	
	τιι(<i>Σρ</i>), GI-2	i) record check and viva.	
	1st(2p), Gr-1	Speed control double acting hydraulic cylinder using metering in and metering out circcuits.	
		i) Aim of the experiment.	
		ii) Video animation showing metering in and metering out circcuits.	
	2nd(2p), Gr-2	Speed control double acting hydraulic cylinder using metering in and metering out circcuits.	
	2πα(2ρ), αι-2	i) Aim of the experiment.	
13th		ii) Video animation showing metering in and metering out circcuits.	
		Speed control double acting hydraulic cylinder using metering in and metering out circcuits.	
	3rd(2p), Gr-1	i) Operating cylinders through metering in and metering out circcuits.	
		ii) Circuit connection through metering in and metering out circcuits.	
	4th(2p), Gr-2	Speed control double acting hydraulic cylinder using metering in and metering out circcuits.	
		i) Operating cylinders through metering in and metering out circcuits.	
		ii) Circuit connection through metering in and metering out circcuits.	
	1st(2p), Gr-1 2nd(2p), Gr-2	† · · · · · · · · · · · · · · · · · · ·	
		Speed control double acting hydraulic cylinder using metering in and metering out circcuits. i) record check and viva.	
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14th		Speed control double acting hydraulic cylinder using metering in and metering out circcuits.	
	2 1/2) 0 4	i) record check and viva.	
	3rd(2p), Gr-1	Doubt clearing , Remedial and leftout practicals	
	4th(2p), Gr-2	Doubt clearing , Remedial and leftout practicals	
15th	1st(2p), Gr-1	Doubt clearing , Remedial and leftout practicals	
	2nd(2p), Gr-2	Doubt clearing , Remedial and leftout practicals	
	3rd(2p), Gr-1	Viva on over all practicals	
	4th(2p), Gr-2	Viva on over all practicals	