

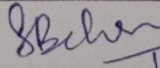
GOVERNMENT POLYTECHNIC JAJPUR
At/ Po: Ragadi, Block: Korei, Dist.: Jajpur, Odisha- 755019
DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN

Department	Semester: 5th	Name of the Teaching: Suprava Behera	
Subject: HM&IFP LAB	No of Days/Week class allotted:4	Semester starts from Date: 15/09/2022 To 22/12/2022 <i>Extended upto 21.01.23</i>	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 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.		
2nd	1st(2p), Gr-1	Performance test on impulse turbine and to find out the efficiency	
		(i) Record check and Viva.	
	2nd(2p), Gr-2	Performance test on impulse turbine and to find out the efficiency	
		(i) Record check and Viva.	
3rd(2p), Gr-1	Performance test on Kaplan turbine and to find out the efficiency		
	(i) Aim of the exp. Theory of Kaplan turbine and working principle (ii) Details of turbine parts, machine handling and procedure.		
4th(2p), Gr-2	Performance test on Kaplan turbine and to find out the efficiency		
	(i) Aim of the exp. Theory of Kaplan turbine and working principle (ii) Details of turbine parts, machine handling and procedure.		
3rd	1st(2p), Gr-1	Performance test on Kaplan turbine and to find out the efficiency	
		(i) Test for efficiency, Calculation, performance curve.	
	2nd(2p), Gr-2	Performance test on Kaplan turbine and to find out the efficiency	
		(i) Test for efficiency, Calculation, performance curve.	
3rd(2p), Gr-1	Performance test on Kaplan 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) Record check and Viva.		
4th	1st(2p), Gr-1	Performance test on Francis turbine and to find out the efficiency	
		(i) Aim of the exp. Theory of Francis turbine and working principle (ii) Details of turbine parts, machine handling and procedure.	
	2nd(2p), Gr-2	Performance test on Francis turbine and to find out the efficiency	
		(i) Aim of the exp. Theory of Francis turbine and working principle (ii) Details of turbine parts, machine handling and procedure.	
3rd(2p), Gr-1	Performance test on Francis turbine and to find out the efficiency		
	(i) Test for efficiency, Calculation, performance curve.		
4th(2p), Gr-2	Performance test on Francis turbine and to find out the efficiency		
	(i) Test for efficiency, Calculation, performance curve.		
5th	1st(2p), Gr-1	Performance test on Francis turbine and to find out the efficiency	
		(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.			
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 reading.		

	4th(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.
6th	1st(2p), Gr-1	Performance test on centrifugal pump and find out the characteristic curves. (i) Test for efficiency, Calculation, characteristics curve.
	2nd(2p), Gr-2	Performance test on centrifugal pump and find out the characteristic curves. (i) Test for efficiency, Calculation, characteristics 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.
7th	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. ii) Circuit connection through valves.
	3rd(2p), Gr-1	Direct operation of single & double acting pneumatic cylinder. Record check and viva.
	4th(2p), Gr-2	Direct operation of single & double acting pneumatic cylinder. Record check and viva.
8th	1st(2p), Gr-1	Operating double acting pneumatic cylinder with quick exhaust valve i) Aim of the experiment. ii) Video animation showing how pneumatic cylinder works.
	2nd(2p), Gr-2	Operating double acting pneumatic cylinder with quick exhaust valve i) Aim of the experiment. ii) Video animation showing how pneumatic cylinder works.
	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.
	4th(2p), Gr-2	Operating double acting pneumatic cylinder with quick exhaust valve i) Operating double acting pneumatic cylinders with quick exhaust valve in pneumatic trainer. ii) Circuit connection through valves.
9th	1st(2p), Gr-1	Operating double acting pneumatic cylinder with quick exhaust valve i) record check and viva.
	2nd(2p), Gr-2	Operating double acting pneumatic cylinder with quick exhaust valve i) record check and viva.
	3rd(2p), Gr-1	Speed control double acting pneumatic cylinder using metering in and metering out circuits. i) Aim of the experiment. ii) Video animation showing metering in and metering out circuits. ii) Operating cylinders through metering in and metering out circuits.
	4th(2p), Gr-2	Speed control double acting pneumatic cylinder using metering in and metering out circuits. i) Aim of the experiment. ii) Video animation showing metering in and metering out circuits. ii) Operating cylinders through metering in and metering out circuits.
10th	1st(2p), Gr-1	Speed control double acting pneumatic cylinder using metering in and metering out circuits. i) Circuit connection through metering in and metering out circuits.
	2nd(2p), Gr-2	Speed control double acting pneumatic cylinder using metering in and metering out circuits. i) Circuit connection through metering in and metering out circuits.

10th	3rd(2p), Gr-1	Speed control double acting pneumatic cylinder using metering in and metering out circuits. i) Record check and viva.
	4th(2p), Gr-2	Speed control double acting pneumatic cylinder using metering in and metering out circuits. i) Record check and viva.
11th	1st(2p), Gr-1	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.
	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	Direct operation of single and double acting hydraulic cylinder. i) record check and viva.
	4th(2p), Gr-2	Direct operation of single and double acting hydraulic cylinder. i) record check and viva.
12th	1st(2p), Gr-1	Direct operation of hydraulic motor. i) Operating hydraulic motor in hydraulic trainer. ii) Circuit connection through various valves.
	2nd(2p), Gr-2	Direct operation of hydraulic motor. i) Operating hydraulic motor in hydraulic trainer. ii) Circuit connection through various valves.
	3rd(2p), Gr-1	Direct operation of hydraulic motor. i) record check and viva.
	4th(2p), Gr-2	Direct operation of hydraulic motor. i) record check and viva.
13th	1st(2p), Gr-1	Speed control double acting hydraulic cylinder using metering in and metering out circuits. i) Aim of the experiment. ii) Video animation showing metering in and metering out circuits.
	2nd(2p), Gr-2	Speed control double acting hydraulic cylinder using metering in and metering out circuits. i) Aim of the experiment. ii) Video animation showing metering in and metering out circuits.
	3rd(2p), Gr-1	Speed control double acting hydraulic cylinder using metering in and metering out circuits. i) Operating cylinders through metering in and metering out circuits. ii) Circuit connection through metering in and metering out circuits.
	4th(2p), Gr-2	Speed control double acting hydraulic cylinder using metering in and metering out circuits. i) Operating cylinders through metering in and metering out circuits. ii) Circuit connection through metering in and metering out circuits.
14th	1st(2p), Gr-1	Speed control double acting hydraulic cylinder using metering in and metering out circuits. i) record check and viva.
	2nd(2p), Gr-2	Speed control double acting hydraulic cylinder using metering in and metering out circuits. 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


 15.09.22
 Signature of the faculty Lect. C Mech)