## GOVERNMENT POLYTECHNIC JAJPUR

## A/ P: Ragadi, Block: Korei, Dist.: Jajpur, Odisha- 755019

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

## DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN

Discipline: Mechanical	Semester: 4th	Name of the Teaching faculty: Manas Kumar Mishra	
Subject: TOM LAB	No of Days/Week class alloted: 2	Semester from Date:	To Date: No of weeks:
Week	Class Day		Topics
		LESSON PLAN, ASSESSMENT SCHEME, Co	s, Exams.
		Determination of centrifugal force of a g	overnor (Hart Nell / Watt/Porter).
	1st(3p, Gr 1)	i) Aim of the expt, theory, procedure	
		ii) Tools and equipments required	
		iii) setting of different types of governors	(Hartnell, watt and porter)
		LESSON PLAN, ASSESSMENT SCHEME, Co	s, Exams.
		Determination of centrifugal force of a g	overnor (Hart Nell / Watt/Porter).
	1st(3p, Gr 2)	i) Aim of the expt, theory, procedure	
1 et		ii) Tools and equipments required	
151		iii) setting of different types of governors	(Hartnell, watt and porter)
		Determination of centrifugal force of a g	overnor (Hart Nell / Watt/Porter).
	2nd/2n (r.1)	i) How to take readings for each type of g	governor(Demo)
	200(3p, Gr 1)	ii) Machine handling and precautions	
		iii) Setting, observations, tabulation and	calculations for centrifugal force by students
		Determination of centrifugal force of a	overnor (Hart Nell / Watt/Porter).
	2nd/2n $(r, 2)$	i) How to take readings for each type of g	governor(Demo)
	2nd(3p, Gr 2)	ii) Machine handling and precautions	
		iii) Setting, observations, tabulation and	calculations for centrifugal force by students
		Determination of centrifugal force of a g	overnor (Hart Nell / Watt/Porter).
	1=+(2= (= 1)	i) Observations and calculation, plotting	necessary graphs
	1St(3p, Gr 1)	ii) Record submission	
		iii) Viva, assessment	
		Determination of centrifugal force of a	overnor (Hart Nell / Watt/Porter).
	1ct(2p. Cr. 2)	i) Observations and calculation, plotting	necessary graphs
	1st(3p, Gr 2)	ii) Record submission	
Qued		iii) Viva, assessment	
2nd		Study & demonstration of static balanci	ng apparatus.
	2nd/2n (r.1)	i) Aim of the expt, theory, procedure	
	2110(5p, 61 1)	ii) Tools and equipments required	
		iii) setting of machine and demo	
		Study & demonstration of static balanci	ng apparatus.
	2nd/2n $(r, 2)$	i) Aim of the expt, theory, procedure	
	2nd(3p, Gr 2)	ii) Tools and equipments required	
		iii) Setting of machine and demo	
	1st(3p, Gr 1)	Study & demonstration of static balanci	ng apparatus.
		i) Machine handling and precautions	
		ii) Taking readings and calculation by stu	dents
	1st(3p, Gr 2)	Study & demonstration of static balanci	ng apparatus.
		i) Machine handling and precautions	
		ii) Taking readings and calculation by stu	dents
3rd		Study & demonstration of static balanci	ng apparatus.

	2nd(3p, Gr 1)	i) Viva, record submission and checking
		ii) Assessment
		Study & demonstration of static balancing apparatus.
	2nd(3p, Gr 2)	i) Viva, record submission and checking
		ii) Assessment
	1st(3p, Gr 1)	Study & demonstration of journal bearing apparatus.
		i) Aim of the expt, theory, procedure
		ii) Tools and equipments required
		iii) Demonstration to conduct practical
		Study & demonstration of journal bearing apparatus.
	1st(3p, Gr 2)	i) Aim of the expt, theory, procedure
		ii) Tools and equipments required
4th		iii) Demonstration to conduct practical
	2nd(3p, Gr 1)	Study & demonstration of journal bearing apparatus.
		i) Observations and calculation by students
		i) Study of different types of journal bearings
		Study & demonstration of journal bearing apparatus
	2nd(3n Gr 2)	i) Observations and calculation by students
	2110(0)) 01 2)	i) Study of different types of journal bearings
	1ct/2n $Cr(1)$	Study & demonstration of journal bearing apparatus.
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	1 et/2 e ( c z 2 )	Study & demonstration of journal bearing apparatus.
	1st(3p, Gr 2)	i) viva, record submission and checking
		II) Assessment
5th		Study of different types of Cam and followers
	2nd(3p, Gr 1)	I) Aim of the expt, theory, procedure
		ii) Tools and equipments required
		iii) Animations and videos of cams and followers
		Study of different types of Cam and followers
	2nd(3p, Gr 2)	i) Aim of the expt, theory, procedure
		ii) Tools and equipments required
		iii) Animations and videos of cams and followers
		Study of different types of Cam and followers
	1st(3p, Gr 1)	i) Demonstration of experiment
		ii) Study of different types of Cam and followers
		Study of different types of Cam and followers
	1st(3p, Gr 2)	i) Demonstration of experiment
6th		ii) Study of different types of Cam and followers
011		Study of different types of Cam and followers
	2nd(3p, Gr 1)	i) viva, record submission and checking
		ii) Assessment
		Study of different types of Cam and followers
	2nd(3p, Gr 2)	i) viva, record submission and checking
		ii) Assessment
	1st(3p, Gr 1)	Study & demonstration of epicyclic gear train.
		i) Aim of the expt, theory
		ii) Tools and equipments required
		iii) Procedure
		Study & demonstration of epicyclic gear train.
	1ct/2n (r 2)	i) Aim of the expt, theory

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		ii) Tools and equipments required
-		iii) Procedure
		Study & demonstration of epicyclic gear train.
	2nd(3p, Gr 1)	i) Setting of machine and demonstration
		ii) Observations and calculation of parameters by students
		Study & demonstration of epicyclic gear train.
	2nd(3p, Gr 2)	i) Setting of machine and demonstration
		ii) Observations and calculation of parameters by students
	1st(3p, Gr 1)	Study & demonstration of epicyclic gear train.
		i) viva, record submission and checking
		ii) Assessment
	1st(3p, Gr 2)	Study & demonstration of epicyclic gear train.
		i) viva, record submission and checking
		ii) Assessment
9+h		Determination of the thickness of ground M.S flat using Vernier Caliper.
011	2nd(2n-Cr1)	i) Aim of the expt, theory, parts of a Vernier caliper
	2fid(3p, Gr 1)	ii) How to find least count
		iii) Procedure to measure thickness of a flat plate (demo)
		Determination of the thickness of ground M.S flat using Vernier Caliper.
		i) Aim of the expt, theory, parts of a Vernier caliper
	2nd(3p, Gr 2)	ii) How to find least count
		iii) Procedure to measure thickness of a flat plate (demo)
		Determination of the thickness of ground M.S flat using Vernier Caliper.
		i) precautions
	1st(3p, Gr 1)	i) handling and practice of taking readings using Vernier Caliner
		iii) Observations and calculation of thickness of a MS flat by students
ŀ		Determination of the thickness of ground M.S flat using Vernier Caliner.
		i) precautions
	1st(3p, Gr 2)	i) handling and practice of taking readings using Vernier Caliner
9th		iii) Observations and calculation of thickness of a MS flat by students
ŀ		Determination of the thickness of ground M S flat using Vernier Caliner
	2nd(3n Gr 1)	i) viva record submission and checking
	2110(00) 01 1)	
		Determination of the thickness of ground M S flat using Vernier Caliner
	2nd(3n Gr 2)	i) viva record submission and shasking
	210(3), 01 2)	
		Determination of diameter of a cylindrical component using micrometer
		i) Aim of the event theory, parts of a micrometer
	1st(3p, Gr 1)	i) Alm of the expt, theory, parts of a micrometer
		ii) Now to find least count
		III) Procedure to measure diameter of a cylindrical component (Demo)
	1st(3p, Gr 2) 2nd(3p, Gr 1)	Determination of diameter of a cylindrical component using micrometer
		I) Aim of the expt, theory, parts of a micrometer
		ii) How to find least count
		iii) Procedure to measure diameter of a cylindrical component (Demo)
10th		Determination of diameter of a cylindrical component using micrometer
		i) Precautions
		ii) Handling and practice
		iii) Observations and calculation of dia by students
ŀ		iii) observations and calculation of dia by students
	2nd(3p, Gr 2)	Determination of diameter of a cylindrical component using micrometer
		i) Precautions
		ii) Handling and practice

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		iii) Observations and calculation of dia by students
		Determination of diameter of a cylindrical component using micrometer
	1st(3p, Gr 1)	i) viva, record submission and checking
		ii) Assessment
		Determination of diameter of a cylindrical component using micrometer
	1st(3p, Gr 2)	i) viva, record submission and checking
		ii) Assessment
	1st(3p, Gr 1)	Determine the heights of gauge blocks or parallel bars using Vernier height gauge.
11th		i) Aim of the expt, theory, parts of a height gauge
		ii) How to find least count
		iii) Procedure to measure height (Demo)
		Determine the heights of gauge blocks or parallel bars using Vernier height gauge.
		i) Aim of the expt, theory, parts of a height gauge
	1st(3p, Gr 2)	ii) How to find least count
		iii) Procedure to measure height (Demo)
		Determine the heights of gauge blocks or parallel bars using Vernier height gauge
		i) Precautions
	1st(3p, Gr 1)	i) Handling and practice
		ii) Observations and calculation of beight by students using beight gauge
		Determine the beichte of gauge block or percelled here using Vernier beicht gauge
		i) pressutions
	1st(3p, Gr 2)	
12th		II) Handling and practice
		III) Observations and calculation of height by students using height gauge
		Determine the heights of gauge blocks or parallel bars using Vernier height gauge.
	2nd(3p, Gr 1)	i) viva, record submission and checking
		II) Assessment
		Determine the heights of gauge blocks or parallel bars using Vernier height gauge.
	2nd(3p, Gr 2)	i) viva, record submission and checking
		ii) Assessment
		Determine the thickness of ground MS plates using slip gauges.
	1st(3p, Gr 1)	i) Aim of the expt, theory
		ii) Slip gauges
		iii) Procedure and Demonstration of experiment
		Determine the thickness of ground MS plates using slip gauges.
	1st(3p, Gr 2)	i) Aim of the expt, theory
	200(0)) 0: 2)	ii) Slip gauges
13th		iii) Procedure and Demonstration of experiment
1500	2nd(2n (* 1)	Determine the thickness of ground MS plates using slip gauges.
		i) Precautions
	210(59, 01 1)	ii) Handling and practice
		iii) Observations and calculation of thickness by students using slip gauges.
	2nd(3p, Gr 2)	Determine the thickness of ground MS plates using slip gauges.
		i) Precautions
		ii) Handling and practice
		iii) Observations and calculation of thickness by students using slip gauges.
	1st(3p, Gr 1)	Determine the thickness of ground MS plates using slip gauges.
		i) viva, record submission and checking
		ii) Assessment
		Determine the thickness of ground MS plates using slip gauges.
	1st(3p, Gr 2)	i) viva, record submission and checking
		ii) Assessment
		Determination of angel of Machined surfaces of components using sin bar with slip gauges.

14th	2nd(3p, Gr 1)	i) Aim of the expt, theory
		ii) how to use sine bars and slip gauges (Demo)
		iii) how to determine angle of a machined surface
	2nd(3p, Gr 2)	Determination of angel of Machined surfaces of components using sin bar with slip gauges.
		i) Aim of the expt, theory
		ii) how to use sine bars and slip gauges (Demo)
		iii) how to determine angle of a machined surface
	1st(3p, Gr 1)	Determination of angel of Machined surfaces of components using sin bar with slip gauges.
		i) Precautions
		ii) Handling and practice
		iii) Observations and calculation by students
	1st(3p, Gr 2)	Determination of angel of Machined surfaces of components using sin bar with slip gauges.
		i) Precautions
		ii) Handling and practice
15th		iii) Observations and calculation by students
	2nd(3p, Gr 1)	Determination of angel of Machined surfaces of components using sin bar with slip gauges.
		i) viva, record submission and checking
		ii) Assessment
	2nd(3p, Gr 2)	Determination of angel of Machined surfaces of components using sin bar with slip gauges.
		i) viva, record submission and checking
		ii) Assessment

Signature of faculty