

GOVERNMENT POLYTECHNIC JAIPUR

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DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN

Discipline: Mechanical	Semester: 3RD	Name of the Teaching faculty: Manas Kumar Mishra
Subject: ME LAB 1	No of Days/Week class allotted: 2	Semester from Date: 15/09/22 To Date: 22/12/22 No of weeks: 16
Week	Class Day	Topics
1st	1st (2p) Gr 1 & Gr 2	Syllabus, Lesson Plan, Cos, Exam and Evaluation Scheme.
		Determine end reactions in a simply supported beam using parallel force apparatus.
		i) Aim of the expt, Theory
		ii) Tools and Equipments required
	2nd (2p) Gr 1 & Gr 2	iii) Demonstration
		iv) precautions
2nd	1st (2p) Gr 1 & Gr 2	Determine end reactions in a simply supported beam using parallel force apparatus.
		i) Taking readings for calculation of end reactions by students
	2nd (2p) Gr 1 & Gr 2	Determine end reactions in a simply supported beam using parallel force apparatus.
		i) Taking readings for calculation of end reactions by students
		ii) viva, records checking, assessment
		Determination of Young's modulus using Searle's apparatus
3rd	1st (2p) Gr 1 & Gr 2	i) Aim of the expt, Theory
		ii) Tools and Equipments required
	2nd (2p) Gr 1 & Gr 2	iii) Demonstration of experiment
		Determination of Young's modulus using Searle's apparatus
4th	1st (2p) Gr 1 & Gr 2	i) Taking readings for calculation of Young's modulus by students
		ii) viva, record checking, assessment
		Determination of torsional rigidity of the shaft using torsion testing machine
	2nd (2p) Gr 1 & Gr 2	i) Aim of the expt, Theory
		ii) Tools and Equipments required
		iii) specimen preparation

5th	1st (2p) Gr 1 & Gr 2	Determination of torsional rigidity of the shaft using torsion testing machine
		i) Demonstration of experiment
		ii) precautions and handling of machine tool
	2nd (2p) Gr 1 & Gr 2	iii) taking readings for calculation of torsional rigidity by students
6th	1st (2p) Gr 1 & Gr 2	Determination of torsional rigidity of the shaft using torsion testing machine
		i) Taking readings for calculation of end reactions by students
	2nd (2p) Gr 1 & Gr 2	ii) viva, records checking, assessment
		Determination of salient points (Young's modulus, yield point, fracture point) from stress- strain curve using Universal Testing Machine
i) Aim of the expt, Theory		
7th	1st (2p) Gr 1 & Gr 2	i) Tools and Equipments required
		ii) specimen preparation
		Determination of salient points (Young's modulus, yield point, fracture point) from stress- strain curve using Universal Testing Machine
	2nd (2p) Gr 1 & Gr 2	i) Demonstration of experiment
ii) precautions and handling of machine tool		
iii) testing of standard specimen in UTM by students		
8th	1st (2p) Gr 1 & Gr 2	Determination of salient points (Young's modulus, yield point, fracture point) from stress- strain curve using Universal Testing Machine
		i) testing of standard specimen in UTM by students
	2nd (2p) Gr 1 & Gr 2	ii) viva, records checking, assessment
		Determination of hardness number by Rockwell/Vickers hardness testing machine
i) Aim of the expt, Theory		
9th	1st (2p) Gr 1 & Gr 2	ii) Tools and Equipments required
		iii) precautions and handling of machine tool
	2nd (2p) Gr 1 & Gr 2	Determination of hardness number by Rockwell/Vickers hardness testing machine
		i) Demonstration of experiment
10th	1st (2p) Gr 1 & Gr 2	ii) testing of standard specimen by students
		Determination of hardness number by Rockwell/Vickers hardness testing machine
	2nd (2p) Gr 1 & Gr 2	i) testing of standard specimen by students
		ii) viva, records checking, assessment
10th	1st (2p) Gr 1 & Gr 2	Determination of hardness number by Rockwell/Vickers hardness testing machine
		i) testing of standard specimen by students
	2nd (2p) Gr 1 & Gr 2	ii) viva, records checking, assessment
Determination of toughness using Impact testing machine (Charpy/Izod)		
10th	2nd (2p) Gr 1 & Gr 2	i) Aim of the expt, Theory
		ii) specimen preparation

11th	1st (2p) Gr 1 & Gr 2	Determination of toughness using Impact testing machine (Charpy/Izod)
		i) Demonstration of experiment
		ii) precautions and handling of machine tool
11th	2nd (2p) Gr 1 & Gr 2	iii) testing of standard specimen
		Determination of toughness using Impact testing machine (Charpy/Izod)
		i) testing of standard specimen by students
12th	1st (2p) Gr 1 & Gr 2	Determination of toughness using Impact testing machine (Charpy/Izod)
		i) testing of standard specimen by students
		ii) viva, records checking, assessment
	2nd (2p) Gr 1 & Gr 2	Determination of Flash point and fire point
		i) Aim of the expt, Theory
13th	1st (2p) Gr 1 & Gr 2	ii) apparatus and consumables required
		iii) Demonstration of experiment
	2nd (2p) Gr 1 & Gr 2	Determination of Flash point and fire point
		i) precaution
	14th	1st (2p) Gr 1 & Gr 2
Determination of Flash point and fire point		
2nd (2p) Gr 1 & Gr 2		i) testing of specimen for flash point and fire point
15th	1st (2p) Gr 1 & Gr 2	Determination of Flash point and fire point
		i) record checking
	2nd (2p) Gr 1 & Gr 2	ii) viva, assessment
		Joule's experiment
16th	1st (2p) Gr 1 & Gr 2	i) Aim of the expt, Theory
		Joule's experiment
	2nd (2p) Gr 1 & Gr 2	i) apparatus and experimental set up required
15th	2nd (2p) Gr 1 & Gr 2	ii) Demonstration of experiment
		Joule's experiment
16th	2nd (2p) Gr 1 & Gr 2	i) establishment of relation between work and heat through experiment
		Joule's experiment
16th	2nd (2p) Gr 1 & Gr 2	i) viva, records checking, assessment
		Any skipped experiments to be done by students


 14.09.22
 signature of faculty
 Manoj Kumar Mishra
 Lecturer, Mechanical