

GOVERNMENT POLYTECHNIC JAJPUR


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

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**DEPARTMENT OF MECHANICAL ENGINEERING
LESSON PLAN (2022-23)**

Discipline: Metallurgical Engg	Semester: 3rd (GR 1)	Name of the Teaching faculty: Manas Kumar Mishra	
Subject: Workshop II	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), Gr1	Syllabus, Lesson plan, Course outcomes, exams, Tests	
		i) Shop talk on different types of machine tools	
	ii) Parts and Functions of various machines		
	2nd (2p), Gr1	i) Different types of tools used in machine shop	
ii) functions and demonstration			
2nd	1st (2p), Gr1	i) General safety practice to be followed inside workshop	
		ii) Record ckecking, viva	
	2nd (2p), Gr1	i) Study of a center lathe	
		ii) parts and their functions	
3rd	1st (2p), Gr1	i) Operations on a center lathe	
		ii) Record ckecking, viva	
	2nd (2p), Gr1	i) Demonstration of operations like facing, turning, parting	
		ii) Safety to be followed	
		iii) Facing, Turning, Parting practice to be performed by students	
4th	1st (2p), Gr1	i) Facing, Turning, Parting to be performed by students on a given cylindrical Job	
	2nd (2p), Gr1	i) Facing, Turning, Parting to be performed by students on a given cylindrical Job	
5th	1st (2p), Gr1	i) Facing, Turning, Parting to be performed by students on a given cylindrical Job	
	2nd (2p), Gr1	i) Taper turning Demonstration	
		ii) Taper turning operation to be performed by students	
6th	1st (2p), Gr1	ii) Taper turning operation to be performed by students	
		ii) Assessment of the Job	
		iii) Record checking	
	2nd (2p), Gr1	i) Study of a drilling machine	
ii) Various parts			
iii) Types of drilling machine			
iv) Difference between drilling and boring, drill tools			
7th	1st (2p), Gr1	i) Demonstration of drilling and counter boring opeartion	
		ii) Safety to be followed	
		iii) drilling and counter boring operation by students	
	2nd (2p), Gr1	i) drilling and counter boring operation by students	
8th	1st (2p), Gr1	i) drilling and counter boring operation by students	
		ii) Assessment of the Job, Record checking	
	2nd (2p), Gr1	i) Demonstration of Milling operations	

9th	1st (2p), Gr1	i) Demonstration of Shaper
	2nd (2p), Gr1	i) Demonstration of grinding operation
10th	1st (2p), Gr1	i) Types of pattern
		ii) Pattern allowances
		iii) Preparation of a simple wooden pattern in carpentry shop
	2nd (2p), Gr1	i) Preparation of a simple wooden pattern in carpentry shop
11th	1st (2p), Gr1	i) Preparation of a simple wooden pattern in carpentry shop
	2nd (2p), Gr1	ii) Assessment of the Job, Record checking
12th	1st (2p), Gr1	i) composition of green sand mould
		ii) preparation of a green sand mould by using wooden pattern
	2nd (2p), Gr1	i) preparation of a green sand mould by using wooden pattern ii) Assessment of the Job, Record checking
13th	1st (2p), Gr1	i) Arc welding principle
		ii) Tools and equipments used
		iii) safety measures
		iv) Electrodes
	2nd (2p), Gr1	i) Demonstartion of Arc welding process ii) Arc welding practice on scraps by students
14th	1st (2p), Gr1	i) Demonstration of Gas welding
		ii) Tools and equipments used
		iii) Practice by students
	2nd (2p), Gr1	i) Demonstration of TIG and MIG ii) Practice by students
15th	1st (2p), Gr1	i) Assessment of the Job, Record checking
	2nd (2p), Gr1	i) Any leftout practicals to be performed ii) Lab Test


 Signature of the faculty
 Manas Kumar Mishra
 Lecturer,
 Mechanical

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DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN (2022-23)

Discipline: Metallurgical I Engg	Semester: 3rd (Gr 2)	Name of the Teaching faculty: Manas Kumar Mishra	
Subject: Workshop II	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), Gr2	Syllabus, Lesson plan, Course outcomes, exams, Tests	
		i) Arc welding principle	
	2nd (2p), Gr2	ii) Tools and equipments used	
		iii) safety measures iv) Electrodes	
2nd	1st (2p), Gr2	i) Demonstartion of Arc welding process	
		ii) Arc welding practice on scraps by students	
	2nd (2p), Gr2	i) Demonstration of Gas welding	
		ii) Tools and equipments used iii) Practice by students	
3rd	1st (2p), Gr2	i) Demonstration of TIG and MIG	
		ii) Practice by students	
	2nd (2p), Gr2	i) Practice by students	
		ii) Assessment of the Job, Record checking	
4th	1st (2p), Gr2	i) Types of pattern	
		ii) Pattern allowances	
	2nd (2p), Gr2	iii) Preparation of a simple wooden pattern in carpentry shop	
		i) Preparation of a simple wooden pattern in carpentry shop	
5th	1st (2p), Gr2	i) Preparation of a simple wooden pattern in carpentry shop	
		ii) Assessment of the Job, Record checking	
	2nd (2p), Gr2	i) composition of green sand mould	
		ii) preparation of a green sand mould by using wooden pattern	
6th	1st (2p), Gr2	i) preparation of a green sand mould by using wooden pattern	
		ii) Assessment of the Job, Record checking	
	2nd (2p), Gr2	iii) viva	
		i) Shop talk on different types of machine tools	
7th	1st (2p), Gr2	ii) Parts and Functions of various machines	
		i) Different types of tools used in machine shop	
	2nd (2p), Gr2	ii) functions and demonstration	
		i) General safety practice to be followed inside workshop	
8th	1st (2p), Gr2	ii) Record ckecking, viva	
		i) Study of a center lathe	
	2nd (2p), Gr2	ii) parts and their functions	
		i) Operations on a center lathe	
		ii) Record ckecking, viva	

9th	1st (2p), Gr2	i) Demonstration of operations like facing, turning, parting
		ii) Safety to be followed
		iii) Facing, Turning, Parting practice to be performed by students
10th	1st (2p), Gr2	i) Facing, Turning, Parting to be performed by students on a given cylindrical Job
	2nd (2p), Gr2	i) Facing, Turning, Parting to be performed by students on a given cylindrical Job
11th	1st (2p), Gr2	i) Taper turning Demonstration
		ii) Taper turning operation to be performed by students
	2nd (2p), Gr2	i) Taper turning operation to be performed by students ii) Assessment of the Job iii) Record checking
12th	1st (2p), Gr2	i) Study of a drilling machine
		ii) Various parts
		iii) Types of drilling machine
		iv) Difference between drilling and boring, drill tools
	2nd (2p), Gr2	i) Demonstration of drilling and counter boring operation ii) Safety to be followed iii) drilling and counter boring operation by students
13th	1st (2p), Gr2	i) drilling and counter boring operation by students
	2nd (2p), Gr2	i) drilling and counter boring operation by students
		ii) Assessment of the Job, Record checking
14th	1st (2p), Gr2	i) Demonstration of Milling operations
	2nd (2p), Gr2	i) Demonstration of Shaper
		i) Demonstration of grinding operation
15th	1st (2p), Gr2	i) Practice by students, ii) Assessment
	2nd (2p), Gr2	i) Any leftout practicals to be performed ii) Lab Test


 14.09.22
 Signature of the faculty
 Manoj Kumar Mishra
 Lecturer, Mechanical