

GOVERNMENT POLYTECHNIC JAJPUR

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DEPARTMENT OF PRECISION MANUFACTURING ENGINEERING

LESSON PLAN (2025-26)

Discipline: PME	Semester: 3rd	Name of the Teaching faculty: Manas Kumar Mishra
Subject: Production technology	No of Days/Week class allotted: 3	Semester from Date: 14/07/25 To Date: 15/11/25 No of weeks: 18
Week	Class Day	Topics
1st	1st	The centre lathe and its principle of working.
	2nd	Types of lathes
	3rd	Lathe specification and size
	4th	Features of lathe bed
2nd	1st	Head stock and tail stock
	2nd	Feed mechanism and change gears.
3rd	1st	Carriage saddle and Cross slide
	2nd	Compound rest, Tool post
	3rd	Apron mechanism
	4th	Lathe accessories, Chucks,
4th	1st	Face plate, Angle plate.
	2nd	Driving plate, Lathe dogs
5th	1st	mandrills, Steady rest
	2nd	Lathe attachments
	3rd	plane and step turning, Taper turning
	4th	Screw cutting
6th	1st	Drilling, Boring, reaming
	2nd	Knurling, Parting off
7th	1st	Types of lathe tools and their uses
	2nd	Brief description of semi-automatic lathes such as capstan lathe
	3rd	Brief description of semi-automatic lathes such as turret lathes
	4th	Advantages and disadvantages over centre lathe
8th	1st	General and periodic maintenance of a centre lathe
	2nd	Capstan lathe vs Turret lathe
9th	1st	Column and knee type milling machine
	2nd	Fixed bed type milling machine
	3rd	Planner type milling machine

	4th	Special purpose milling machine
10th	1st	constructional features of horizontal milling M/C.
	2nd	General maintenance of the machine
11th	1st	Types of milling cutters
	2nd	Milling operations like plane milling, face milling, angular milling, form milling
	3rd	straddle milling, gang milling, cutting speed and feed for different tools
	4th	up and down milling
12th	1st	Simple and compound indexing.
	2nd	Differential indexing.
13th	1st	and external) grinding machines.
	2nd	Bench and portable grinder, Tool and cutter grinding machine
	3rd	Profile grinding machine, Methods of mounting work piece on cylindrical grinding machines (Including chuck and mandrel)
	4th	Honing, lapping Process
14th	1st	Buffing, super finishing processes
	2nd	Terms associated with grinding wheel operations including loading, glazing, dressing and truing and its interpretation
15th	1st	
	2nd	Selection criteria of grinding wheels
	3rd	Static and dynamic balancing of grinding wheels - need and methods
	4th	Methods of mounting grinding wheel.
16th	1st	probable question discussion
	2nd	VST

Mishra
10.7.25
Sign of Teacher