

PNS SCHOOL OF ENGINEERING & TECHNOLOGY, KENDRAPARA

LESSON PLAN

Discipline – MECHANICAL ENGG.	Semester – 4 th	Name of Teacher –ER SANYASI SWAIN
Subject –TH-2 MANUFACTURING TECHNOLOGY	No. of days/week class allotted -6	Semester from date 14.02.2025 to date 17.05.2025 No. of weeks - 11
Week	Class Day	Theory/Practical Topics
1st	1st	Ch-1 Tool Materials
	2nd	1.1 Composition of various tool materials
	3rd	1.2 Physical properties
	4th	Uses of such tool materials
	5th	Different tool component
	6th	Different tool component
2nd	1st	CH-2 Cutting Tools
	2nd	Cutting action of various hand tools such as Chisel, hack saw blade, dies and reamer
	3rd	Turning tool geometry and purpose of tool angle.
	4th	Machining process parameters (Speed, feed and depth of cut)
	5th	Coolants and lubricants in machining
	6th	Purpose of coolants and lubricants in machining.
3rd	1st	CH 3. Lathe Machine: Construction and working of lathe
	2nd	Operations carried out in a lathe (Turning, thread cutting, taper turning)
	3rd	internal machining, parting off, facing, knurling)
	4th	Safety measures during machining
	5th	Capstan lathe: Difference with respect to engine lathe
	6th	Major components and their function of capstan lathe
4th	1st	Define multiple tool holders. Turret Lathe: Difference with respect to capstan lathe
	2nd	Major components and their function of Turret lathe
	3rd	Draw the tooling lay out for preparation of a hexagonal bolt & bush
	4th	CH 4. Shaper: Potential application areas of a shaper machine
	5th	Major components and their function
	6th	Explain the automatic table feed mechanism
5th	1st	Explain the construction & working of toolhead
	2nd	Explain the quick return mechanism through sketch.
	3rd	State the specification of a shaping machine.
	4th	State the specification of a shaping machine
	5th	CH 5. Planning Machine
	6th	Application area of a planar and its difference with respect to shaper
6th	1st	Major components and their functions
	2nd	The table drive mechanism
	3rd	Working of tool and tool support

	4th	Working of tool and tool support
	5th	Clamping of work through sketch.
	6th	Clamping of work through sketch.
	1st	CH 6. Milling Machine
	2nd	Types of milling machine and operations performed by them
	3rd	Explain work holding attachment
	4th	Construction & working of simple dividing head, universal dividing head
	5th	Procedure of simple and compound indexing
7th	6th	Illustration of different indexing methods
	1st	CH-7. Slotter: major components
	2nd	Construction of slotter machine
	3rd	Construction of slotter machine
	4th	Working of slotter machine
	5th	Working of slotter machine
8th	6th	Tools used in slotter
	1st	8. Grinding: Significance of grinding operations
	2nd	Manufacturing of grinding wheels
	3rd	Criteria for selecting of grinding wheels
	4th	Specification of grinding wheels with example
	5th	Working of Cylindrical Grinder, Surface Grinder
9th	6th	Working of Centre less Grinder
	1st	CH 9.0 Internal Machining operations Classification of drilling machines
	2nd	Working of Bench drilling machine
	3rd	Working of Pillar drilling machine
	4th	Working of Radial drilling machine
	5th	Boring • Basic Principle of Boring
10th	6th	Different between Boring and drilling
	1st	Broaching • Types of Broaching (pull type, push type)
	2nd	Advantages of Broaching and applications
	3rd	CH 10 Surface finish, lapping Definition of Surface finish
	4th	Description of lapping & explain their specific cutting.
	5th	Description of lapping & explain their specific cutting.
11th	6th	REVISION & PYQ

SIGN OF LECTURER

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SIGN OF PRINCIPAL