

KIITPOLYTECHNIC, BHUBANESWAR

LESSON PLAN

Session(2023-2024)

Discipline: Mechanical Engineering	Semester: 4 th , Summer/2024	Name of the Faculty: Namita Behera Lecturer Email ID: namitafme@kp.kiit.ac.in
Subject: Manufacturing Technology, Theory-2	No. of Days/week: 04	StartDate: 16/01/2024 EndDate: 26/04/2024

Week	Class Day	Theory Topics
1st	1st	Types of tool material, desirable properties, State Composition of various tool materials
	2nd	State physical properties & uses of tool materials
	3rd	Types of cutting tool, tool nomenclature
	4th	State purpose of providing different tools and specify the angles for different materials to be machined
2nd	1st	Doubt Clearing Class
	2nd	Tool geometry (ASA System and ORS System)
	3rd	Describe tool geometry of turning tool & milling cutter
	4th	Explain cutting action of various hand tools such as Chisel, hacksaw blade
3rd	1st	State the purpose of using coolants & lubricants
	2nd	Specify various coolants and lubricants
	3rd	Doubt Clearing Class
	4th	Assignment evaluation, class test.
4th	1st	S.S & S. Clathe, Define S.S & S. Clathe Identify the different parts of lathe & their functions
	2nd	Different parts of Lathe and their function. Explain the function of different components of capstan lathe Define multiple tool holders
	3rd	Enlist the different operations on lathe State & explain turning, grooving

	4th	Stepturning,threadcutting,taperturning,partingoff
5th	1st	DifferentoperationofLathemachine
	2nd	Explainthefunctionofdifferentcomponents ofcapstanlatheDefine multiple tool holders
	3rd	ExplainthefunctionsofdifferentcomponentsofTurretLathe
	4th	Explaintheindexingarrangementforturrethead,Explainwith neat sketchthefeedingmechanism
6th	1st	DifferencebetweenCapstanandTurretLathe.Drawthetoolinglayout forpreparationofa hexagonalbolt&bush
	2nd	AdvantageofCapstan&turretlathe overS.S&S.CLathe.Describeparts, typesandfunctionoflathemachine
	3rd	DoubtClearingClass
	4th	Assignmentevaluation,classtest.
7th	1st	Quiz-1
	2nd	Listoutthedifferentparts,Describethethe functions ofpartsofShaper machine
	3rd	Explainthequickreturnmechanismthroughsketch,crankandslotted link mechanism
	4th	crankandslottedlinkmechanismandHydraulicmechanism
8th	1st	Explaintheconstruction&workingoftoolheadandtheautomatictable feedmechanism
	2nd	Statethespecificationofashapingmachine
	3rd	Enlistdifferentparts,DescribeandexplainthefunctionofpartsofPlanar machine
	4th	Explainthetabledrivesmechanism
9th	1st	Explaintheworkingoftoolandtoolsupport.Explaintheclampingof workthroughsketch
	2nd	EnlistthedifferentpartsnSpecifyvarioustoolsofslottermachine
	3rd	Explaintheconstruction&workingofslottermachine
	4th	DoubtClearingclass
10th	1st	Definegrinding,Explainmanufacturingofgrindingwheels
	2nd	StateCriteriaforselectingofgrindingwheelsandAbrasives,Bond, Grade,Grain,Grit,Structure
	3rd	Explainspecificationofgrindingwheelswithexample

	4th	Explain working of Cylindrical Grinder
11th	1st	Explain Surface Grinder and Centreless Grinder
	2nd	Doubt Clearing class
	3rd	<i>Assignment Evaluation & Class Test</i>
	4th	Quiz-2
12th	1st	Classify of drilling, Bench drilling Pillar drilling machine and Radial drilling machine
	2nd	Basic Principle of Boring, Difference between Boring and drilling Types of Broaching (pull type, push type)
	3rd	Advantages & Application of Broaching.
	4th	Doubt Clearing & Practice Class
13th	1st	Define Surface finish, Define superfinishing
	2nd	Describe lapping & explain their specific cutting.
	3rd	Various types of milling machine, Explain work holding attachment
	4th	Describe construction & working of simple dividing head, universal dividing head
14th	1st	Doubt Clearing Class
	2nd	Describe the different numerical indexing procedure and show one example from each indexing method.
	3rd	Direct indexing, Simple indexing, Compound indexing
	4th	Angular indexing and differential indexing
15th	1st	<i>Doubt Clearing class</i>
	2nd	<i>Assignment Evaluation & Class Test</i>
	3rd	<i>Discussion of Previous year questions</i>
	4th	<i>Discussion of Previous year questions</i>