LESSON PLAN – MT (4TH SEMESTER), MECHANICAL ENGINEERING_2024-25

TH2

Discipline – MECHANICAL ENGG.	Semester – 4th	Name of the Faculty – MUKESH KUMAR DALEI
Subject – MANUFACTURING TECHNOLOGY	No. of days/week class allotted --- 4	No. of weeks – 15 Semester From date : To Date:
Week	**Class Day**	**Theory/Practical Topics**
1st	1st	1. Tool Materials
	2nd	Composition of various tool materials
	3rd	Physical properties
	4th	Uses of such tool materials
2nd	1st	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)
3rd	1st	Coolants and lubricants in machining
	2nd	Purpose of coolants and lubricants in machining
	3rd	3. Lathe Machine: Construction and working of lathe
	4th	Operations carried out in a lathe (Turning, thread cutting, taper turning, internal machining, parting off, facing, knurling)
4th	1st	Safety measures during machining
	2nd	Capstan lathe: Difference with respect to engine lathe
	3rd	Major components and their function Define multiple tool holders
	4th	Turret Lathe: Difference with respect to capstan lathe
5th	1st	Major components and their function
	2nd	Draw the tooling lay out for preparation of a hexagonal bolt & bush
	3rd	4. Shaper: Potential application areas of a shaper machine
	4th	Major components and their function

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6th	1st	Explain the automatic table feed mechanism
	2nd	Explain the construction & working of tool head
	3rd	Explain the quick return mechanism through sketch
	4th	State the specification of a shaping machine.
7th	1st	5. Planning Machine
	2nd	Application area of a planar and its difference with respect to shaper
	3rd	Major components and their functions
	4th	The table drive mechanism
8th	1st	Working of tool and tool support
	2nd	Clamping of work through sketch.
	3rd	6. Milling Machine
	4th	Types of milling machine and operations performed by them
9th	1st	Explain work holding attachment
	2nd	Construction & working of simple dividing head, universal dividing head
	3rd	Procedure of simple and compound indexing
	4th	Illustration of different indexing methods
10th	1th	7. Slotter: major components
	2nd	Their function
	3rd	Construction of slotter machine
	4th	Working of slotter machine
11th	1st	Tools used in slotter
	2nd	Tools used in slotter
	3rd	8. Grinding: Significance of grinding operations
	4th	Manufacturing of grinding wheels
12th	1st	Criteria for selecting of grinding wheels
	2nd	Specification of grinding wheels with example
	3rd	Working of Cylindrical Grinder, Surface Grinder
	4th	Working of Centre less Grinder
13th	1st	9. Internal Machining operations: Classification of drilling machines

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	2nd	Working of Bench drilling machine, Pillar drilling machine
	3rd	Working of Radial drilling machine
	4th	Boring: Basic Principle of Boring
14th	1st	Different between Boring and drilling
	2nd	Broaching: Types of Broaching (pull type, push type),Advantages of Broaching and applications
	3rd	10. Surface finish, lapping: Definition of Surface finish, Define super finishing
	4th	Description of lapping & explain their specific cutting.
15th	1st	Revision and previous year questions
	2nd	Revision and previous year questions
	3rd	Revision and previous year questions
	4th	Revision and previous year questions

Teaching Faculty

HOD (Mechanical Engg.)

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