

LESSON PLAN 2023-24

SUBJECT :MANUFACTURING TECH NOLOGY (4TH SEM)

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Class No.	Topic	Subtopics	Teaching Aids/Activities
1	Tool Materials	Introduction, composition of tool materials	Chalk & board, PPT
2	Tool Materials	Physical properties and uses	Samples, chart
3	Cutting Tools	Cutting action: chisel, hacksaw blade, dies, reamer	Real tools, demonstration
4	Cutting Tools	Tool geometry, tool angles	Charts, models
5	Cutting Tools	Machining parameters: speed, feed, depth of cut	Animations, board work
6	Cutting Tools	Coolants and lubricants: types & functions	Video, lubricant samples
7	Cutting Tools	Summary and discussion	Quiz, interaction
8	Cutting Tools	Class Test 1	Test paper
9	Lathe Machine	Construction and components	Model, chart, animation
10	Lathe Machine	Functions of components	Video, real lathe
11	Lathe Machine	Operations: turning, facing, knurling, parting	Lab demo
12	Lathe Machine	Thread cutting, taper turning, safety measures	Demo, charts
13	Lathe Machine	Capstan lathe: difference, construction	Diagrams, video
14	Lathe Machine	Tool holders, indexing turret	Chart, animation
15	Lathe Machine	Turret lathe: comparison, functions	Chart, real part
16	Lathe Machine	Tool layout for bolt & bush	Sketching, exercise
17	Lathe Machine	Revision	Recap, Q&A
18	Lathe Machine	Class Test 2	Test paper
19	Shaper	Applications, components	Chart, animation
20	Shaper	Table feed, tool head, quick return mech.	Diagram & video
21	Shaper	Specifications, revision	Quiz, worksheet
22	Planning Machine	Applications, components	Video, comparison chart
23	Planning Machine	Table drive, tool support	Lab visit, sketches
24	Planning Machine	Clamping, working	Workholding demo
25	Planning Machine	Summary and revision	Worksheet
26	Milling Machine	Types of milling machines	PPT, charts
27	Milling Machine	Milling operations	Animations, sample parts
28	Milling Machine	Work holding attachments	Real parts, lab demo
29	Milling Machine	Simple & universal dividing head	Disassembled models
30	Milling Machine	Simple & compound indexing	Hands-on example
31	Milling Machine	Indexing methods	Exercise, chart
32	Milling Machine	Revision & Class Test 3	Test
33	Slotter	Components and functions	Charts, animation
34	Slotter	Working, tools used	Tool demo
35	Grinding	Importance of grinding	Video, board notes
36	Grinding	Grinding wheel manufacturing	Demo chart, video

37	Grinding	Wheel selection criteria	Sample wheels
38	Grinding	Specification & examples	Practical parts
39	Grinding	Cylindrical grinding	Machine demo/video
40	Grinding	Surface & centreless grinding	Lab demo
41	Grinding	Summary and discussion	Flashcards, quiz
42	Internal Machining	Drilling machine types	Video, sketch
43	Internal Machining	Bench, pillar, radial drilling	Machine demo
44	Internal Machining	Boring principle, difference from drilling	Comparison sheet
45	Internal Machining	Broaching: pull, push, advantages	PPT
46	Internal Machining	Applications of broaching	Industrial video
47	Internal Machining	Summary and Class Test 4	Test
48	Surface Finish	Surface finish and super finishing	PPT, chart
49	Surface Finish	Lapping: process, applications	Lapping samples
50	Surface Finish	Specific cutting action in lapping	Video demo
51	Surface Finish	Revision & worksheet	Exercise
52	Cumulative Revision	Tool materials to planning machine	Board, discussion
53	Cumulative Revision	Milling to grinding	Sample problems
54	Cumulative Revision	Internal machining to lapping	Flashcards
55	Practical Overview	Machine parts and tools in lab	Workshop visit
56	Doubt Clearance	Doubt handling session	Open discussion
57	Class Test 5	Full syllabus test	Paper-based
58	Answer Discussion	Review test answers	Peer evaluation
59	Final Recap	Quick recap of all units	Q&A blitz
60	Mock Exam	Final practice paper	Exam mode