



IIPM SCHOOL OF ENGINEERING AND TECHNOLOGY

LESSON PLAN: Summer 2023

Sub: TH-2 MANUFACTURING TECHNOLOGY

Course :Diploma Semester:4TH

Duration : 60 hours

Faculty name : PRASANNA MOHANTY

Sl. No	Chapter	Proposed Week for Teaching	Lecture No.	Subject Topic	Important Teaching Point	Content Source
1.	Chapter-1 Tool Materials	1 st	1	Introduction	Use of tools in machining process	Text Book of Workshop Technology Hazra Choudhury Voll & II
2.			2	Composition of various tool materials	Important metal constituents in tools	Text Book of Workshop Technology Hazra Choudhury Voll & II
3.			3	Physical properties of tool material	Mechanical properties of tool	Text Book of Workshop Technology Hazra Choudhury Voll & II
4.			4	uses of such tool materials		Text Book of Workshop Technology Hazra

						Choudhury Voll & II
5.	Chapter – 2 Cutting Tools	2 nd	1	Cutting action of various tools	such as Chisel, hacksaw blade, dies and reamer	Text Book of Workshop Technology Hazra Choudhury Voll & II
6.			2	Turning tool geometry	Single point cutting tool	Text Book of Workshop Technology Hazra Choudhury Voll & II
7.			3	purpose of tool angle	ASA & ORS system	Text Book of Workshop Technology Hazra Choudhury Voll & II
8.			4	Machining process parameters	Speed, feed and depth of cut	Text Book of Workshop Technology Hazra Choudhury Voll & II
9.			3 rd	1	Coolants and lubricants in machining and purpose	Purpose of coolant
10.	2	Revision			Text Book of Workshop Technology Hazra Choudhury Voll & II	
11.	Chapter-3 Lathe Machine	3		Construction and working of lathe and CNC lathe		Text Book of Workshop Technology Hazra Choudhury Voll & II
12.		4	Operations carried out in		Text Book of Workshop	

				a lathe(Turning, thread cutting, taper turning, internal machining, parting off, facing, knurling) Safety measures during machining		Technology Hazra Choudhury Voll & II
13.		4 th	1	Capstan lathe	Schematic Diagram with explanation	Text Book of Workshop Technology Hazra Choudhury Voll & II
14.			2	Define multiple tool holders		Text Book of Workshop Technology Hazra Choudhury Voll & II
15.			3	Turret Lathe	Schematic Diagram with explanation	Text Book of Workshop Technology Hazra Choudhury Voll & II
16.			4	Major components and their function of Turret Lathe		Text Book of Workshop Technology Hazra Choudhury Voll & II
17.		5 th	1	Draw the tooling layout for preparation of a hexagonal bolt & bush		Text Book of Workshop Technology Hazra Choudhury Voll & II
18.			2	Revision		Text Book of Workshop

						Technology Hazra Choudhury Voll & II
19.	Chapter-4 Shaper		3	Potential application areas of a shaper machine	Use of shaper machine	Text Book of Workshop Technology Hazra Choudhury Voll & II
20.			4	Major components and their function		Text Book of Workshop Technology Hazra Choudhury Voll & II
21.			6 th	1	Explain the automatic feed mechanism	
22.		2		Explain the construction & working of tool head		Text Book of Workshop Technology Hazra Choudhury Voll & II
23.		3		Explain the quick return mechanism through sketch		Text Book of Workshop Technology Hazra Choudhury Voll & II
24.		4		State the specification of a shaping machine.		Text Book of Workshop Technology Hazra Choudhury Voll & II
25.	Chapter-5 Planning Machine	7 th	1	Introduction		Text Book of Workshop Technology Hazra Choudhury Voll & II

26.			2	Application area of a planer and its difference with respect to shaper		Text Book of Workshop Technology Hazra Choudhury Voll & II
27.			3	Major components and their functions		Text Book of Workshop Technology Hazra Choudhury Voll & II
28.			4	The table drive mechanism		Text Book of Workshop Technology Hazra Choudhury Voll & II
29.		8 th	1	Working of tool and tool support		Text Book of Workshop Technology Hazra Choudhury Voll & II
30.			2	Clamping of work through sketch.		Text Book of Workshop Technology Hazra Choudhury Voll & II
31.	Chapter-6 Milling Machine		3	Types of milling machine		Text Book of Workshop Technology Hazra Choudhury Voll & II
32.			4	operations performed by Milling Machine and also same for CNC milling machine		Text Book of Workshop Technology Hazra Choudhury Voll & II
33.		9 th	1	Explain work holding attachment		Text Book of Workshop Technology

						Hazra Choudhury Voll & II
34.			2	Construction & working of simple dividing head		Text Book of Workshop Technology Hazra Choudhury Voll & II
35.			3	universal dividing head		Text Book of Workshop Technology Hazra Choudhury Voll & II
36.			4	Procedure of simple indexing		Text Book of Workshop Technology Hazra Choudhury Voll & II
37.		10 th	1	Procedure of compound indexing		Text Book of Workshop Technology Hazra Choudhury Voll & II
38.			2	Illustration of different indexing methods		Text Book of Workshop Technology Hazra Choudhury Voll & II
39.	Chapter-7 Slotter		3	Introduction		Text Book of Workshop Technology Hazra Choudhury Voll & II
40.			4	Major components and their function		Text Book of Workshop Technology Hazra Choudhury Voll & II
41.		11 th	1	Construction		Text Book of

				of slotter machine		Workshop Technology Hazra Choudhury Voll & II
42.			2	working of slotter machine		Text Book of Workshop Technology Hazra Choudhury Voll & II
43.			3	Tools used in slotter		Text Book of Workshop Technology Hazra Choudhury Voll & II
44.			4	Revision		Text Book of Workshop Technology Hazra Choudhury Voll & II
45.	Chapter-8 Grinding	12 th	1	Significance of grinding operations		Text Book of Workshop Technology Hazra Choudhury Voll & II
46.			2	Manufacturing of grinding wheels		Text Book of Workshop Technology Hazra Choudhury Voll & II
47.			3	Criteria for selecting of grinding wheels		Text Book of Workshop Technology Hazra Choudhury Voll & II
48.			4	Specification of grinding wheels with example Working of		Text Book of Workshop Technology Hazra Choudhury

				Cylindrical Grinder		Voll & II
49.		13 th	1	Specification of grinding wheels with example Working of Surface Grinder		Text Book of Workshop Technology Hazra Choudhury Voll & II
50.			2	Specification of grinding wheels with example Working of Centreless Grinder		Text Book of Workshop Technology Hazra Choudhury Voll & II
51.	Chapter-9 Internal Machining operations		3	Classification of drilling machines		Text Book of Workshop Technology Hazra Choudhury Voll & II
52.			4	Working of Bench drilling machine <ul style="list-style-type: none"> • Pillar drilling machine • Radial drilling machine 		Text Book of Workshop Technology Hazra Choudhury Voll & II
53.			14 th	1	Basic Principle of Boring	
54.		2		Different between Boring and drilling		Text Book of Workshop Technology Hazra Choudhury Voll & II
55.		3		Types of Broaching(pull type, push type)		Text Book of Workshop Technology Hazra

						Choudhury Voll & II
56.			4	Advantages of Broaching and applications		Text Book of Workshop Technology Hazra Choudhury Voll & II
57.	Chapter-10 Surface finish, lapping	15 th	1	Definition of Surface finish		Text Book of Workshop Technology Hazra Choudhury Voll & II
58.			2	Description of lapping		Text Book of Workshop Technology Hazra Choudhury Voll & II
59.			3	explain specific cutting of Lapping		Text Book of Workshop Technology Hazra Choudhury Voll & II
60.			4	Revision		Text Book of Workshop Technology Hazra Choudhury Voll & II