

## **IIPM SCHOOL OF ENGINEERIN AND TECHNOLOGY**

## LESSON PLAN: Summer 2023

## Sub: TH-2 MANUFACTURING TECHNOLOGY

Course :Diploma

Semester:4<sup>TH</sup>

Duration : 60 hours

Faculty name : PRASANNA MOHANTY

SI. No	Chapter	Proposed Week for Teaching	Lecture No.	Subject Topic	Important Teaching Point	Content Source
1.	Chapter-1 Tool Materials	1 <sup>st</sup>	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 <sup>nd</sup>	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 <sup>rd</sup>	1	Coolants and lubricants in machining and purpose	Purpose of coolant	Text Book of Workshop Technology Hazra Choudhury Voll & II
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 <sup>th</sup>	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 <sup>th</sup>	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 <sup>th</sup>	1	Explain the automatic able feed mechanism		Text Book of Workshop Technology Hazra Choudhury Voll & II
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 <sup>th</sup>	1	Introduction		Text Book of Workshop Technology Hazra Choudhury Voll & II

20			2	Annitantian	Tautoria
26.			2	Application	Text Book of
				area of a	Workshop
				planer and its	Technology
				difference	Hazra
				with respect	Choudhury
				to shaper	Voll & II
27.			3	Major	Text Book of
				components	Workshop
				and their	Technology
				functions	Hazra
					Choudhury
					Voll & II
28.	-		4	The table	Text Book of
20.			4	drive	
					Workshop
				mechanism	Technology
					Hazra
					Choudhury
	-				Voll & II
29.		8 <sup>th</sup>	1	Working of	Text Book of
				tool and tool	Workshop
				support	Technology
					Hazra
					Choudhury
					Voll & II
30.			2	Clamping of	Text Book of
				work through	Workshop
				sketch.	Technology
					Hazra
					Choudhury
					Voll & II
31.	Chapter-6		3	Types of	Text Book of
	Milling			milling	Workshop
	Machine			machine	Technology
	Machine			machine	
					Hazra
					Choudhury
	-				Voll & II
32.			4	operations	Text Book of
				performed by	Workshop
				Milling	Technology
				Machine and	Hazra
				also same for	Choudhury
				CNC milling	Voll & II
				machine	
33.		9 <sup>th</sup>	1	Explain work	Text Book of
				holding	Workshop
				attachment	Technology
	1		1		

		+	-		
					Hazra
					Choudhury
					Voll & II
34.			2	Construction	Text Book of
				& working of	Workshop
				simple	Technology
				dividing head	Hazra
					Choudhury
					Voll & II
35.			3	universal	Text Book of
35.			5		
				dividing head	Workshop
					Technology
					Hazra
					Choudhury
					Voll & II
36.			4	Procedure of	Text Book of
				simple	Workshop
				indexing	Technology
				indexing	Hazra
					Choudhury
					Voll & II
		th			
37.		10 <sup>th</sup>	1	Procedure of	Text Book of
				compound	Workshop
				indexing	Technology
					Hazra
					Choudhury
					Voll & II
38.			2	Illustration of	Text Book of
				different	Workshop
				indexing	Technology
				methods	Hazra
				methous	Choudhury
20	Charles 7	_	2		Voll & II
39.	Chapter-7		3	Introduction	Text Book of
	Slotter				Workshop
					Technology
					Hazra
					Choudhury
					Voll & II
40.			4	Major	Text Book of
				components	Workshop
				and their	Technology
				function	Hazra
					Choudhury
		aath		Canata atia	Voll & II
41.		11 <sup>th</sup>	1	Construction	Text Book of

<u>-</u>			- 	of clotton	Markahan
				of slotter	Workshop
				machine	Technology
					Hazra
					Choudhury
					Voll & II
42.			2	working of	Text Book of
				slotter	Workshop
				machine	Technology
					Hazra
					Choudhury
					Voll & II
42	-		2	Trada and the	
43.			3	Tools used in	Text Book of
				slotter	Workshop
					Technology
					Hazra
					Choudhury
					Voll & II
44.			4	Revision	Text Book of
					Workshop
					Technology
					Hazra
					Choudhury
		. eth			Voll & II
45.	Chapter-8	12 <sup>th</sup>	1	Significance of	Text Book of
	Grinding			grinding	Workshop
				operations	Technology
					Hazra
					Choudhury
					Voll & II
46.			2	Manufacturing	Text Book of
				of grinding	Workshop
				wheels	Technology
					Hazra
					Choudhury
					Voll & II
47	-			Critorio for	
47.			3	Criteria for	Text Book of
				selecting of	Workshop
				grinding	Technology
				wheels	Hazra
					Choudhury
					Voll & II
48.			4	Specification	Text Book of
				of grinding	Workshop
				wheels with	Technology
				example	Hazra
				Working of	Choudhury
1					Choudhury

				Cylindrical	Voll & II
				Grinder	
49.		13 <sup>th</sup>	1	Specification	Text Book of
				of grinding	Workshop
				wheels with	Technology
				example	Hazra
				Working of	Choudhury
				Surface	Voll & II
				Grinder	
50.			2	Specification	Text Book of
				of grinding	Workshop
				wheels with	Technology
				example	Hazra
				Working of	Choudhury
				Centreless	Voli & II
				Grinder	
51.	Chapter-9		3	Classification	Text Book of
	Internal			of drilling	Workshop
	Machining			machines	Technology
	operations				Hazra
					Choudhury
					Voll & II
52.			4	Working of	Text Book of
				Bench drilling	Workshop
				machine	Technology
				<ul> <li>Pillar drilling</li> </ul>	Hazra
				machine	Choudhury
				Radial	Voll & II
				drilling	
				machine	
53.		14 <sup>th</sup>	1	Basic Principle	Text Book of
				of Boring	Workshop
					Technology
					Hazra
					Choudhury
	_				Voll & II
54.			2	Different	Text Book of
				between	Workshop
				Boring and	Technology
				drilling	Hazra
					Choudhury
					Voll & II
55.			3	Types of	Text Book of
				Broaching(pull	Workshop
				type, push	Technology
				type)	Hazra

					Choudhury Voll & II
56.			4	Advantages of Broaching and	Text Book of Workshop
				applications	Technology
					Hazra
					Choudhury Voll & II
57.	Chapter-10	15 <sup>th</sup>	1	Definition of	Text Book of
57.	Surface	15	-	Surface finish	Workshop
	finish,				Technology
	lapping				Hazra
					Choudhury
					Voll & II
58.			2	Description of	Text Book of
				lapping	Workshop
					Technology
					Hazra
					Choudhury
	4				Voll & II
59.			3	explain	Text Book of
				specific	Workshop
				cutting of	Technology
				Lapping	Hazra
					Choudhury Voll & II
60.	4		4	Revision	Text Book of
00.			4	NEVISION	Workshop
					Technology
					Hazra
					Choudhury
					Voll & II