

**JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA**

Name of the Faculty: B KISHAN / M SOREN	Academic Year:2021-2022
Course No.: Th.2	Course Name: MANUFACTURING TECHNOLOGY
Program: Diploma	Branch: Mechanical
Year/Sem: IV	Section:

Sl NO.	Period	Time (min)	Unit/ Chapter	Topic to be cover	Teaching Method
1	1	55	1	Introduction of various tool materials	Black Board
2	2	55	1	Composition of various tool materials	Black Board
3	3	55	1	Physical properties various tool materials	Black Board
4	4	55	1	Uses of various tool materials	Black Board
5	5.	55	1.	Revision of Chapter-1	Black Board
6	6	55	2	Cutting action of tools such as Chisel	Black Board
7	7	55	2	Cutting action of various tools such hacksaw blade, dies and reamer	Black Board
8	8	55	2	Turning tool geometry	Smart Class
9	9	55	2	Purpose of tool angle	Smart Class
10	10	55	2	Machining process parameters (Speed, feed and depth of cut)	Black Board
11	11	55	2	Coolants and lubricants in machining and purpose	Black Board
12	12	55	2	Revision of Chapter-2	Black Board
13	13	55	3	Operations carried out in a Lathe (Turning, thread cutting)	Black Board
14	14	55	3	Operations carried out in a Lathe (Taper turning, internal machining, parting off, facing, knurling)	Black Board
15	15	55	3	Safety measures during machining, Difference between engine lathe and Capstan lathe	Black Board
16	16	55	3	Major components of Capstan lathe and their function	Smart Class
17	17	55	3	Define multiple tool holders of Capstan Lathe	Black Board

18	18	55	3	Major components and their function (Turret lathe)	Black Board
19	19	55	3	Draw the tooling layout for preparation of a hexagonal bolt & bush	Black Board
20	20	55		<b>INTERNAL ASSESMENT</b>	
21	21	55	4	Introduction and application areas of a shaper machine	Black Board
22	22	55	4	Major components of Shaper Machine and their function	Smart Class
23	23	55	4	Explain the automatic feed mechanism Of Shaper Machine	Smart Class
24	24	55	4	Explain the construction & working of tool head of shaper Machine	SMART CLASS AND PRACTICAL OBSERVATION IN WORKSHOP
25	25	55	4	Explain the quick return mechanism through sketch of Shaper Machine	Smart Class
26	26	55	4	State the specification of a Shaper machine	Black Board
27	27	55	5	Application area of a Planning Machine and its difference with respect to Shaper Machine	Black Board
28	28	55	5	Major components and their functions of Planner machine	Smart Class
29	29	55	5	The table drive mechanism of Planner machine	Smart Class
30	30	55	5	Working of tool and tool support of planner Clamping of work through sketch	Black Board
31	31	55	5	Revision of Chapter-3	Black Board
32	32	55	6	Types of milling machine and operations performed by them and also same for CNC milling machine	Black Board
33	33	55	6	Explain work holding attachment of Milling machine	Black Board and practical observation
34	34	55	6	Construction & working of simple dividing head	Black Board
35	35	55	6	Construction & working of Universal dividing Head	Black Board
36	36	55	6	Procedure of simple Indexing, Compound indexing	Black Board
37	37	55	6	Illustration of different indexing methods	Black Board
38	38	55	6	Revision of Chapter-6	Black Board

39	39	55	7	Major components and their	Smart Class
40	40	55	7	Construction Slotter machine	Black Board
41	41	55	7	working of Slotter machine	Black Board
42	42	55	7	Tools used in Slotter	Black Board
43	43	55	7	Revision of Chapter-7	Black Board
44	44	55	8	Significance of grinding operations	Black Board
45	45	55	8	Manufacturing of grinding wheels	Black Board
46	46	55	8	Criteria for selecting of grinding wheels	Black Board
47	47	55	8	Criteria for selecting of grinding wheels	Black Board
48	48	55	8	Specification of grinding wheels and Working of Cylindrical Grinder	Black Board
49	49	55	8	Specification of grinding wheels and Working of Surface Grinder, Centreless Grinder	Black Board
50	50	55	8	Revision of Chapter-8	Black Board
51	51	55	9	Working of Bench drilling machine	Smart Class
52	52	55	9	Working of Pillar drilling machine, Radial drilling machine	Black Board
53	53	55	9	Basic Principle of Boring Difference between Boring and drilling	Black Board
54	54	55	9	Broaching Machine (pull type, push type) Advantages of Broaching and applications	Black Board
55	55	55	10	Definition of Surface finish	Black Board
56	56	55	10	Description of lapping & explain their specific cutting	Black Board
57	57	55		Class Discussion on Chapter-1 & 2	Black Board
58	58	55		Class Discussion on Chapter-3 & 4	Black Board
59	59	55		Class Discussion on Chapter-5,7 & 8	Black Board
60	60	55		Class Discussion on Chapter-6,9 & 10	Black Board