

Discipline: Mechanical Engineering	Semester : 4 th Semester	Name of the Teaching Faculty: Shri Arun kumar Sahu, Ptgf mechanical engineering	
Subject: MANUFACTURING TECHNOLOGY	No. of Days/week Class Allotted: 60	No of weeks: 18	
week	Class Day	Theory Topics	
1 st	1 st	Composition of various tool materials	
	2 nd	Physical properties& uses of such tool materials.	
	3 rd	Cutting action of various and tools such as Chisel, hacksaw blade, dies and reamer	
	4 th	Turning tool geometry and purpose of tool angle	
2 nd	1 st	Machining process parameters (Speed, feed and depth of cut)	
	2 nd	Coolants and lubricants in machining and purpose	
	3 rd	Construction and working of lathe and CNC lathe	
	4 th	Major components of a lathe and their function	
3 rd	1 st	Operations carried out in a lathe(Turning, thread cutting, taper turning, internal machining, parting off, facing, knurling)	
	2 nd	Safety measures during machining	
	3 rd	Capstan lathe Difference with respect to engine lathe	
	4 th	Major components and their function	
4 th	1 st	Define multiple tool holders	
	2 nd	Turret Lathe Difference with respect to capstan lathe	
	3 rd	Major components and their function	
	4 th	Draw the tooling layout for preparation of a hexagonal bolt &bush	
5 th	1 st	Shaper Potential application areas of a shaper machine	
	2 nd	Major components and their function	
	3 rd	Explain the automatic able feed mechanism	
	4 th	Explain the construction &working of tool head	
6 th	1 st	Explain the quick return mechanism through sketch	
	2 nd	State the specification of a shaping machine.	
	3 rd	Application area of a planer and its difference with respect to shaper	
	4 th	Major components and their functions	
7 th	1 st	The table drive mechanism	

	2 nd	Working of tool and tool support	
	3 rd	Clamping of work through sketch	
	4 th	Types of milling machine and operations performed by them	
8 th	1 st	CNC milling machine	
	2 nd	Explain work holding attachment	
	3 rd	Construction & working of simple dividing head, universal dividing head	
	4 th	Procedure of simple and compound indexing	
9 th	1 st	Illustration of different indexing methods	
	2 nd	Major components and their function	
	3 rd	Construction and working of slotter machine	
	4 th	Tools used in slotter	
10 th	1 st	Significance of grinding operations	
	2 nd	Manufacturing of grinding wheels	
	3 rd	Criteria for selecting of grinding wheels	
	4 th	Specification of grinding wheels with example	
11 th	1 st	Working of Cylindrical Grinder	
	2 nd	Surface Grinder Centreless Grinder	
	3 rd	Bench drilling machine Pillar drilling machine	
	4 th	Radial drilling machine	
12 th	1 st	Basic Principle of Boring	
	2 nd	Different between Boring and drilling	
	3 rd	Types of Broaching(pull type, push type)	
	4 th	Advantages of Broaching and applications	
13 th	1 st	Definition of Surface finish	
	2 nd	Description of lapping& explain their specific cutting	
	3 rd	Revision of Chapter – 1	
	4 th	Revision of Chapter – 2. 1-2.3	
14 th	1 st	Revision of Chapter – 2.4-2.6	
	2 nd	Revision of Chapter – 3.1,3.2	
	3 rd	Revision of Chapter – 3.3,3.4	
	4 th	Revision of Chapter – 4.1,4.2	
15 th	1 st	Revision of Chapter – 4.3,4.4	
	2 nd	Revision of Chapter – 4.5,4.6	
	3 rd	Revision of Chapter – 5.1,5.2	
	4 th	Revision of Chapter – 5.3,5.4,5.5	

16 th	1 st	Revision of Chapter – 6.1,6.2,6.3	
	2 nd	Revision of Chapter – 6.4,6.5	
	3 rd	Revision of Chapter – 7	
	4 th	Revision of Chapter – 8	
17 th	1 st	Revision of Chapter – 9	
	2 nd	Revision of Chapter – 10	
	3 rd	Discussion of Probable Questions and Answers (1)	
	4 th	Discussion of Probable Questions and Answers(2)	
18 th	1 st	Discussion of Probable Questions and Answers (3)	
	2 nd	Discussion of Probable Questions and Answers(4)	
	3 rd	Discussion of Probable Questions and Answers (5)	
	4 th	Discussion of Probable Questions and Answers (6)	