

BHADRAK ENGINEERING SCHOOL AND TECHNOLOGY(BEST),ASURALI BHADRAK

MANUFACTURING TECHNOLOGY (Th.-02)

CHAPTER-WISE DISTRIBUTION OF PERIODS & EXPECTED MARKS

Sl. No.	Name of the Chapter	Periods as per Syllabus	Required period	Expected Marks
01	Tool materials	04	04	06
02	Cutting Tools	06	06	10
03	Lathe Machine	08	08	18
04	Shaper	06	06	10
05	Planing Machine	06	06	09
06	Milling Machine	08	08	10
07	Slotter	06	06	08
08	Grinding	06	06	11
09	Internal Machining Operations	06	06	12
10	Surface finish, Lapping	04	04	06
	TOTAL	60	60	100

Sign of Lect.

Sign of HOD.

Sign of AIC

Sign of Vice Principal

LESSON PLAN

Discipline: Mechanical Engg.	Semester: fourth(4 th)	Name Of The Faculty: Er. Prasanta Kumar Mohanty.
Subject: Manufacturing Technology.	No of days/ week class allotted: Six(6)	Semester from date: 14. 02.2023 to Date: 23. 05.2023 No of weeks: 15
WEEK	CLASS DAY	THEORY TOPICS
1 st	1 st	Chapter No.- 01(Tool materials) Introduction to Tool Materials
	2 nd	Composition of various tool materials
	3 rd	Physical properties of tool materials
	4 th	uses of such tool materials.
	5 th	Possible question answer discussion
	6 th	Chapter No.- 02(Cutting Tools) Introduction to Cutting Tools
2 nd	1 st	Cutting action of various tools such as Chisel
	2 nd	Cutting action of hacksaw blade, dies and reamer
	3 rd	Turning tool geometry and
	4 th	purpose of tool angles
	5 th	Machining process parameters (Speed, feed and depth of cut)
	6 th	Coolants and lubricants in machining
3 rd	1 st	and purpose
	2 nd	Possible question answer discussion
	3 rd	Chapter No.- 03(Lathe Machine) Introduction to Lathe Machine
	4 th	Construction and working of lathe and CNC lathe
	5 th	Major components of a lathe
	6 th	Function of major components of lathe
4 th	1 st	Operations carried out in a lathe Turning, thread cutting, taper turning,
	2 nd	internal machining, parting off, facing, knurling
	3 rd	Safety measures during machining
	4 th	Monthly test-01
	5 th	Capstan lathe
	6 th	Working of capstan lathe
5 th	1 st	Difference with respect to engine lathe
	2 nd	Major components and their function
	3 rd	Define multiple tool holders
	4 th	Turret Lathe
	5 th	Working of turret lathe
	6 th	Difference with respect to capstan lathe
	1 st	Major components of turret lathe

6 th	2 nd	Function of main parts of turret lathe
	3 rd	Draw the tooling layout for preparation of a hexagonal bolt & bush
	4 th	Procedure for preparation of hexagonal bolt
	5 th	Procedure for preparation of hexagonal bush.
	6 th	Possible question answer discussion
7 th	1 st	Chapter No.- 04(Shaper) Introduction to Shaper
	2 nd	Potential application areas of a shaper machine
	3 rd	Major components of shaper
	4 th	Function Of major components
	5 th	Monthly test-02
	6 th	Explain the automatic table feed mechanism
8 th	1 st	Working of table feed mechanism
	2 nd	Explain the construction & working of tool head
	3 rd	Explain the quick return mechanism through sketch
	4 th	Working of quick return mechanism
	5 th	State the specification of a shaping machine.
	6 th	Review class
9 th	1 st	Review class
	2 nd	Chapter No.- 05 (Planing Machine) Introduction to Planing Machine
	3 rd	Application area of a planer and its difference with respect to shaper
	4 th	Major components and their functions
	5 th	The table drive mechanism
	6 th	Working of table drive mechanism
10 th	1 st	Working of tool and tool support
	2 nd	Clamping of work through sketch.
	3 rd	Working of clamping devices
	4 th	Possible question answer discussion
	5 th	Chapter No.- 06 (Milling Machine) Introduction to Milling Machine
	6 th	Monthly test-03
11 th	1 st	Types of milling machine and operations performed by them
	2 nd	Working of CNC milling machine
	3 rd	Explain work holding attachment
	4 th	Construction & working of simple dividing head, universal dividing head
	5 th	Procedure of simple and compound indexing
	6 th	Illustration of different indexing methods
	1 st	Possible question answer discussion
	2 nd	Chapter No.- 07 (slotter) Introduction to Slotter

12 th	3 rd	Major components and their function
	4 th	Construction and working of slotter machine
	5 th	Tools used in slotter
	6 th	Possible question answer discussion
13 th	1 st	Chapter No.- 08 (Grinding) Introduction to Grinding
	2 nd	Significance of grinding operations
	3 rd	Monthly test-04
	4 th	Manufacturing of grinding wheels
	5 th	Criteria for selecting of grinding wheels
	6 th	Specification of grinding wheels with example Working of • Cylindrical Grinder
14 th	1 st	Working of • Surface Grinder • Centreless Grinder
	2 nd	Possible question answer discussion
	3 rd	Chapter No.- 09 (Internal Machining operations)
	4 th	Working of • Bench drilling machine
	5 th	Working of Pillar drilling machine • Radial drilling machine
	6 th	Boring • Basic Principle of Boring • Different between Boring and drilling
15 th	1 st	Broaching • Types of Broaching(pull type, push type) • Advantages of Broaching and applications
	2 nd	Possible question answer discussion
	3 rd	Chapter No.- 10 (Surface finish, lapping) Introduction to Surface finish, lapping
	4 th	Definition of Surface finish
	5 th	Description of lapping& explain their specific cutting
	6 th	Possible question answer discussion