

Discipline:	Mechanical	Semester:	1 <sup>st</sup>	Name of the Teaching Faculty: Tapas Kumar Panda	
Subject:	Manufacturing Technology	No of Days/Week Class Allotted:	4	Semester From date: 10.03.22 To date: 12.06.22	No. of Weeks: 15
WEEK	Class Day	Theory Topics			
1 <sup>st</sup>	1 <sup>st</sup>	Tool materials: - Introduction			
	2 <sup>nd</sup>	Composition of various tool materials.			
	3 <sup>rd</sup>	Physical properties of tool materials.			
	4 <sup>th</sup>	Application of tool materials.			
	5 <sup>th</sup>				
2 <sup>nd</sup>	1 <sup>st</sup>	Cutting tools: - Cutting action of various tools.			
	2 <sup>nd</sup>	Chisel, hacksaw blade dies & reamer.			
	3 <sup>rd</sup>	Turning tool geometry & purpose of tool angle.			
	4 <sup>th</sup>	Machining process parameters.			
	5 <sup>th</sup>	@			
3 <sup>rd</sup>	1 <sup>st</sup>	Continue machining process parameters.			
	2 <sup>nd</sup>	Coolants and lubricants in machining and purpose.			
	3 <sup>rd</sup>	Lathe machines: - Construction & working of lathe & CNC m/c.			
	4 <sup>th</sup>	Operation carried out in lathe.			
	5 <sup>th</sup>				



WEEK	Class Day	Theory Topics
4th	1st	Capstan lathe (difference with respect to engine lathe).
	2nd	Major Components & their function.
	3rd	Turret lathe vs Capstan lathe.
	4th	Major Components & their fun?
	5th	
5th	1st	Draw tooling layout for preparation of hexagonal bolt.
	2nd	Class test - 1 (Question answers discussion)
	3rd	Shaper: - Potential application areas of shaper m/c.
	4th	Major components & their function.
	5th	
6th	1st	Explain automatic abse feed mechanism.
	2nd	Explain construction & working of tool head.
	3rd	Explain quick return mechanism.
	4th	State the specification of shaping machine.
	5th	

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WEEK	Class Day	Theory Topics			
7th	1st	Planning machine: — App <sup>n</sup> area of planes & its difference woth shapes.			
	2nd	Major Components & their function.			
	3rd	The table drive mechanism.			
	4th	Working of tool and tool Support.			
	5th				
8th	1st	Clamping of work through sketch.			
	2nd	Summarize the above.			
	3rd	Milling machine: — Introduction.			
	4th	Types of milling machine.			
	5th				
9th	1st	Operations performed & also same for CNC.			
	2nd	Explain work holding attachment.			
	3rd	Concept & working of dividing head & universal head.			
	4th	Procedures of simple & compound indexing.			
	5th				

WEEK	Class Day	Theory Topics
10th	1st	Illustration of different indexing methods.
	2nd	Summarise the above.
	3rd	Slotted :- Introduction.
	4th	Major Components & their function.
	5th	
11th	1st	Concept & working of slotted machine
	2nd	Continue concept & working of slotted machine.
	3rd	Tools used in slotted.
	4th	Summarise the above
	5th	
12th	1st	Grinding :- Introduction
	2nd	Significance of grinding operation
	3rd	Manufacturing of grinding wheels.
	4th	Criteria for selecting grinding wheels.
	5th	

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WEEK	Class Day	Theory Topics
13th	1st	specification of grinding wheels
	2nd	working of surface grinders.
	3rd	Internal machining operations, — classification of drilling machines.
	4th	working of bench drilling & pillar drilling
	5th	
14th	1st	Boring & its basic principles.
	2nd	Difference bet <sup>n</sup> boring & drilling.
	3rd	Types of broaching & advantages.
	4th	Surface finishing, lapping: — Defn of surface finishing.
	5th	
15th	1st	Description of lapping.
	2nd	Explain the specific cutting.
	3rd	Doubt clearing class.
	4th	Class test - II (Question answer discussion)
	5th	