-: LESSON PLAN:-

Discipline:- MECHANICAL	Semester:	Name of the teaching faculty:- Muktikanto Mohapatro
Subject. MANUFACTURING TECHNOLOGY	No. Of days / per week class allotted:- DV	Semester 444 from date: 35/01/21 No. Of weeks:- 15
Week	Class day	Theory/ Practical Topics :
	1st	Tool Materials- Composition of various tool materials
1 ST	2nd	Physical properties & uses of such tool materials
	3rd	Physical properties & uses of such tool materials
	4th	Cutting Tools - Cutting action of various hand tools such as Chisel, hack saw blade, dies and reamer
	1st	Cutting action of various hand tools such as dies and reamer
ND	2nd	Turning tool geometry and purpose of tool angle
	3rd	Machining process parameters (Speed, feed and depth of cut)
	4th .	Coolants and lubricants in machining and purpose
	1st	Lathe Machine - Construction and working of lathe
RD	2nd	Major components of a lathe and their function
	3rd	Operations carried out in a lathe - Turning, thread cutting,
	4th	taper turning, internal machining, parting off, facing, knurling)
	1st	Safety measures during machining
1	2nd	Capstan lathe
3	rd	Difference with respect to engine lathe
4	th	Major components and their function , Define multiple tool holders
1	st	Turret Lathe
2	nd	Difference with respect to capstan lathe ,

		Major components and their function
	3rd	Major componention of a hexagonal bottom
	4th	Major components and their roo Draw the tooling lay out for preparation of a hexagonal bolt & bush
	1st	and of a shaper model
	2nd	Shaper - Potential application areas of their function Major components and their function
тн	2110	Explain the automatic table feed mechanism
	3rd	Explain the automatic and a marking of tool head
	4th	Explain the data Explain the construction & working of tool head
	1st	Explain the quick return mechanism through sketch
	2nd	State the specification of a shaping machine
7. TH	Zilu	Planning Machine
	3rd	
	4th	Application area of a planar and its difference with respect
,		to shaper Major components and their functions
	1st	
8 TH	2nd	The table drive mechanism
8	3rd	Working of tool and tool support
	4th	Clamping of work through sketch
	1st	Milling Machine
	2nd	Types of milling machine and operations performed by
9 TH	•,	them
	3rd	Explain work holding attachment
	4th	Construction & working of simple dividing head, universal dividing head
	1st	Internal Assement
10 TH	2nd	Procedure of simple and compound indexing
10	3rd	Illustration of different indexing methods
	4th	Slotter Machine
	1st	Major components and their function
11 TH	2nd	Construction and working of slotter machine
11''	3rd	Tools used in slotter
	4th	Grinding-Significance of grinding operations
	1st	Manufacturing of grinding wheels

<i>y</i>	F	Lught
12 ¹⁸	2nd	Criteria for selecting of grinding wheels
	3rd	Specification of grinding wheels with example Working of Cylindrical Grinder, Surface Grin , Centre less Grinder
	4th	Internal Machining operations Classification of drillingmachines , Working of - Bench drill machine , Pillardrilling machine , Radial drilling machine machine , Pillardrilling machine , Different between Boring
70	1st	Boring - Basic Principle of Boring / Em
13 TM	2nd	and drilling Boring - Basic Principle of Boring , Different between Boring and drilling and drilling
	3rd	and drilling Surface finish, lapping - Definition of Surface finish , Define super finishing
	4th	Super finishing Surface finish, lapping - Definition of Surface finish , Define super finishing Boring - Basic Principle of Boring , Different between Boring
	1st	Boring - Basic Principle of Boring , Different and drilling Broaching - Types of Broaching (pull type, push type) ,
14 TH	2nd	Broaching - Types of Broaching (pun type) Advantages of Broaching and applications Description of lapping & explain their specific cutting
	3rd	Description of lapping & explain their specific cutting Description of lapping & explain their specific cutting
	4th	REVISION
15 TH	1st 2nd	REVISION
	3rd	REVISION
	4th	REVISION

PRINCIPAL, RK Institute of Engg & Tech Kantapada,Niali,Cuttack

-: LESSON PLAN:-

		-:LESSUN PLAN:-
Discipline:-	Semester:	Name of the teaching faculty:-
MECHANICAL	4 TH	
Subject. MANUFACTURING TECHNOLOGY .	No. Of days / per week class allotted:- OU	Divyor Prokash nath Tiwari Semester wan from date: 03.02.22 To Date: 30-0422 No. Of weeks:- 15
Week	Class day	Theory/ Practical Topics :
	1st	Tool Materials- Composition of various tool materials
1 st .	2nd	Physical properties & uses of such tool materials
	3rd	Physical properties & uses of such tool materials
	4th	Cutting Tools - Cutting action of various hand tools such as Chisel, hack saw blade, dies and reamer
	1st	Cutting action of various hand tools such as dies and reamer
ND	2nd	Turning tool geometry and purpose of tool angle
	3rd	Machining process parameters (Speed, feed and depth of cut)
	4th .	Coolants and lubricants in machining and purpose
-	1st	Lathe Machine - Construction and working of lathe
2	2nd	Major components of a lathe and their function
3	rd	Operations carried out in a lathe - Turning, thread cutting ,
41	th	taper turning, internal machining, parting off, facing, knurling)
1s	t	Safety measures during machining
2n	d	Capstan lathe
3rd	H	Difference with respect to engine lathe
4th		Major components and their function , Define multiple tool holders
1st		Turret Lathe
2nd		Difference with respect to capstan lathe ,

		Land	Major components and their function
			Draw the tooling lay out for preparation of a hexagonal bolt & bush
		4111	
		151	Shaper - Potential application areas of a shaper machine
		2nd	Shaper - Porential application Major components and their function
	6."	ard	Explain the automatic table feed mechanism
		4th	Explain the construction & working of tool head
		151	Explain the quick return mechanism through sketch
	7111	2nd	State the specification of a shaping machine
		3rd	Planning Machine
		4th	Application area of a planar and its difference with respect
П		0.4	to shaper Major components and their functions
		1st	
	8111	2nd	The table drive mechanism
		3rd	Working of tool and tool support
		4th	Clamping of work through sketch
		1st	Milling Machine
	9 TH	2nd	Types of milling machine and operations performed by them
		3rd	Explain work holding attachment
		4th	Construction & working of simple dividing head, universal dividing head
		1st	Internal Assement
	10TH	2nd	Procedure of simple and compound indexing
	10 TH	3rd	Illustration of different indexing methods
		510	
		4th	Slotter Machine
		1st	Major components and their function
1	!1 [™]	2nd	Construction and working of slotter machine
		3rd	Tools used in slotter
		4th	Grinding-Significance of grinding operations
			o o managoperations
		1st	Manufacturing of grinding wheels
		1	

12 TH	2nd	Criteria for selecting of grinding wheels
	3rd	
		Specification of grinding wheels with example Working of Cylindrical Grinder, Surface Grin
	4th	, Centre less Grinder
		Internal Machining operations-Classification of drillingmachines, Working of - Bench drill
	1st	machine , Pillardrilling machine , Radial drilling machine
. Tu		Boring - Basic Principle of Boring , Different between Boring
13 TH	2nd	and drilling
	2.10	Boring - Basic Principle of Boring , Different between Boring
	3rd	and drilling
	Siu	Surface finish, lapping - Definition of Surface finish, Define
	4th	super finishing Surface finish, lapping - Definition of Surface finish , Define
•	7611	Surface finish, lapping - Definition of Surface (missy)
	1st	Boring - Basic Principle of Boring , Different between Boring
		and drilling
T.,	2nd	Broaching - Types of Broaching (pull type, push type),
14 TH		Advantages of Broaching and applications
	3rd	Description of lapping & explain their specific cutting
•	4th	Description of lapping & explain their specific cutting
	1st	REVISION
15 TH	2nd	REVISION
	3rd	REVISION
	4th	REVISION

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-: LESSON PLAN:-

Discipline:-	Semester:	Name of the teaching faculty:- Divya prakash noth Tiwari Semester 4+44 from date: No. Of weeks:- 15
MECHANICAL	4 TH	& Debarranishix
Subject.	No. Of	Semester 4+M
MANUFACTURING	days / per	from date: 14.52.20 To Date: 20 NT. 22
TECHNOLOGY	week class	No. Of weeks:-
	allotted:- 4	ν γ
Week	Class day	Theory/ Practical Topics :
	1st	Tool Materials- Composition of various tool materials
1 ST	2nd	Physical properties & uses of such tool materials
	3rd	Physical properties & uses of such tool materials
	4th	Cutting Tools - Cutting action of various hand tools such as Chisel, hack saw blade, dies and reamer
	1st	Cutting action of various hand tools such as dies and
	150	reamer
2 ND	2nd	Turning tool geometry and purpose of tool angle
	3rd	Machining process parameters (Speed, feed and depth of cut)
	4th	Coolants and lubricants in machining and purpose
	1st	Lathe Machine - Construction and working of lathe
3 RD	2nd	Major components of a lathe and their function
	3rd	Operations carried out in a lathe - Turning, thread cutting,
	4th	taper turning, internal machining, parting off, facing, knurling)
	1st	Safety measures during machining
4 TH .	2nd	Capstan lathe
,	3rd	Difference with respect to engine lathe
	4th	Major components and their function , Define multiple tool holders
	1st	Turret Lathe
5 TH	2nd	Difference with respect to capstan lathe ,

		Manufacturing of grinding wheels
	3rd 4th	Grinding-Significance of grinding operations
н	2nd	Tools used in slotter
	1st	Construction and working of slotter machine
	4th	Major components and their function
	3rd	Slotter Machine
тн	2nd	Illustration of different indexing methods
	1st	Procedure of simple and compound indexing
	4th	dividing head Internal Assement
	3rd	Construction & working of simple dividing head, universal
·H	2nd	them Explain work holding attachment
	1st	Types of milling machine and operations performed by
	4th	Milling Machine
	3rd	Clamping of work through sketch
тн	2nd	Working of tool and tool support
	1st	The table drive mechanism
		Major components and their functions
	4th	Application area of a planar and its difference with respect to shaper
7 TH	3rd	Planning Machine
	2nd	State the specification of a shaping machine
	1st	Explain the quick return mechanism through sketch
	4th	Explain the construction & working of tool head
6 [™]	3rd	Explain the automatic table feed mechanism
	2nd	
	1st	Shaper - Potential application areas of a shaper machine Major components and their function
	4th	Major components and the Major components and
	3rd	Major components and their function

12 TH	2nd	Criteria for selecting of grinding wheels
	3rd	Specification of grinding wheels with example Working of Cylindrical Grinder, Surface Grind, Centre less Grinder
	4th	Internal Machining operations-Classification of drillingmachines, Working of - Bench drillingmachine
	1st	Boring - Basic Principle of Boring , Difference
13 [™]	2nd	Boring - Basic Principle of Boring , Different between Boring and drilling
	3rd	Surface finish, lapping - Definition of Surface finish , Define super finishing
	4th	Surface finish, lapping - Definition of Surface finish, Define super finishing
	1st	Boring - Basic Principle of Boring , Different between Boring and drilling
14 TH	2nd	Broaching - Types of Broaching (pull type, push type), Advantages of Broaching and applications
	3rd	Description of lapping & explain their specific cutting
	4th	Description of lapping & explain their specific cutting
15 TH	1st	REVISION
	2nd	REVISION
	3rd	REVISION
	4th	REVISION

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-:LESSON PLANT

		-:LESSON PLANT
Discipli MI CHAI	VICAL ATH	Name of the reaching faculty. Debadotta Canantray
Subject TOLA	No Of One Decimal Charles Of Of	tromedate 35/01/21 To Date 30/04/21 No. Of Weeks US
Week	(lass day	Theory/ tractical Topics :
	161	Simple mechanism Link ,kinematic chain, mechanism, machine
2"	200	Inversion, four bar link mechanism and its inversion
	310	Lower pair and higher pair
	411)	Lower pair and higher pair
	1.51	Cam and followers
2 ^{no}	2nd	Cam and followers
	3rd	Friction between nut and screw for square thread, screw jack
	41h	Friction between nut and screw for square thread, screw jack
	1st	Bearing and its classification, Description of roller, needle roller& ball bearings
3 ^{RO}	2nd	Bearing and its classification, Description of roller, needle roller& ball bearings
	3rd	Torque transmission in flat pivot& conical pivot bearings.
	4th	Torque transmission in flat pivot& conical pivot bearings.
Walled Control of Palace	1st	Flat collar bearing of single and multiple types
,	2116	Torque transmission for single and multiple clutcher
	3rd	Working of simple frictional brains
	Atti	Working of simple frictional brakes.
	1st	Working of Absorption type of dynamometer

		Determine belt thickness and width for given permissible stress for open	
	3rd	Determine belt thickness and width for given permission. and crossed belt considering centrifugal tension. I width for given permissible stress for open	
		and crossed bert control of the for given permissible stress for open	
	4th	and crossed belt considering centrifugal tension open Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension.	
		V-belts and V-belts pulleys	
	1st	V-pells and v botte p	
	21	Concept of crowning of pulleys.	
7 TH	2nd	Concept of Growing 5	
	3rd	Concept of crowning of pulleys.	
	ord .		
	4th	Gear drives and its terminology.	
\	1	toverted and	
	1.st	Gear trains, working principle of simple, compound, reverted and	
	2 1	epicyclic gear trains.	
8 TH	2nd	Function of governor	
	3rd	Classification of governor	
		Classification of governor	
	4th	Working of Watt, Porter, Proel and Hartnell governors.	
	12-1		
	1st	Working of Watt, Porter, Proel and Hartnell governors.	
	2nd	Conceptual explanation of sensitivity, stability and isochronisms.	
9 TH		Conceptual explanation of Sensitivity, Stability and Isochromsins.	
	3rd	Conceptual explanation of sensitivity, stability and isochronisms.	
	A.1		
	4th	Function of flywheel.	
	1st	Function of flywheel.	
		ranedon of hywheel.	
10 TH	2nd	Comparison between flywheel &governor.	
10			
	3rd .	Fluctuation of energy and coefficient of fluctuation of speed.	
	4th	Concept of static and dynamic balancing	
		concept of static and dynamic balancing	
	1st	Concept of static and dynamic balancing	
	2		
.1 TH	2nd	Static balancing of rotating parts.	
	3rd	Principles of balancing of reciprocating parts.	_
		The state of salations of recipiocating parts.	
	4th	Causes and effect of unbalance.	

e landarida que e compresidente	1st	Difference between static and dynamic balancing	
12 ¹⁸	2nd	Difference between static and dynamic balancing	
	3rd	Revision	
	4th	Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)	
and the second second	1st	(Amplitude, time period and	
13 ¹⁸	2nd	Amplitude, time period and frequency, cycle)	
	3rd	Classification of vibration.	
	4th	Classification of vibration.	
	1st	Basic concept of natural, forced & damped vibration	
14 ^{TP}	2nd	Basic concept of natural, forced & damped vibration	
	3rd	Torsional and Longitudinal vibration.	
	4th	Torsional and Longitudinal vibration.	
15 ¹⁶	1st	Causes & remedies of vibration.	
	2nd	Causes & remedies of vibration. Revision	
	3rd 4th	Revision	
	1		

PRINCIPAL RK Institute of Engg & Tech Kantapada,Niali,Cuttack

-:LESSON PLAN:

		-:LESSON PLANT	
Discipline:- MECHANICAL		Name of the teaching faculty: Debadately Sammonfo	de
Subject. TOIM	No. Of days / per week class allotted:- by	Semester 444 from date: 03 (02) 22 To Date: 30/64/22 No. Of weeks:- 15	
Week	Class day	Theory/ Practical Topics :	
	1st	Simple mechanism Link ,kinematic chain, mechanism, machine	
157	2nd	Inversion, four bar link mechanism and its inversion	
	3rd	Lower pair and higher pair	
	4th	Lower pair and higher pair	
	1st	Cam and followers	
2ND	2nd	Cam and followers	
	3rd .	Friction between nut and screw for square thread, screw jack	Ÿ
,	4th	Friction between nut and screw for square thread, screw jack	
	1st	Bearing and its classification, Description of roller, needle roller& ball bearings	
RD	2nd	Bearing and its classification, Description of roller, needle roller& ball bearings	
	3rd	Torque transmission in flat pivot& conical pivot bearings.	
	4th	Torque transmission in flat pivot& conical pivot bearings.	
	1st	Flat collar bearing of single and multiple types	
	2nd	Torque transmission for single and multiple clutches	
	3rd	Working of simple frictional brakes.	
	4th	Working of simple frictional brakes.	
	1st	Working of Absorption type of dynamometer	

	3rd	Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension.	
	4th	Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension.	
7 ¹ 2	1st	V-belts and V-belts pulleys	
	2nd	Concept of crowning of pulleys.	
	3rd	Concept of crowning of pulleys.	
	4th	Gear drives and its terminology.	
	1st	Gear trains, working principle of simple, compound, reverted and	
8 TH	2nd	Function of governor	
	3rd	Classification of governor	
	4th	Working of Watt, Porter, Proel and Hartnell governors.	
	1st	Working of Watt, Porter, Proel and Hartnell governors.	
9 ^{TF}	2nd	Conceptual explanation of sensitivity, stability and isochronisms.	
	3rd	Conceptual explanation of sensitivity, stability and isochronisms.	
	4th	Function of flywheel.	
	1st	Function of flywheel.	
10 [™]	2nd	Comparison between flywheel &governor.	
	3rd .	Fluctuation of energy and coefficient of fluctuation of speed.	
	4th	Concept of static and dynamic balancing	
1 TH	1st	Concept of static and dynamic balancing	
	2nd	Static balancing of rotating parts.	
	3rd	Principles of balancing of reciprocating parts.	
	4th	Causes and effect of unbalance.	

	151	Difference between static and dynamic calanone
.2	2nd	Difference between static and dynamic balar ong
	310	Revision
	Sto	Introduction to Vichation and related terms (Amplitude, time period and frequency cycle)
	1st	(Amplitude, time period and frequency, cycle)
13	2nd	Amplitude time period and frequency, cycle)
	3rd	Classification of vibration.
	4th	Classification of vibration.
14 ⁷	1st	Basic concept of natural, forced & damped vibration
	2nd	Basic concept of natural, forced & damped vibration
	3rd	Torsional and Longitudinal vibration.
	4th	Torsional and Longitudinal vibration.
	1st	Causes & remedies of vibration.
	2nd	Causes & remedies of vibration.
15 ^{T-}	3rd	Revision
	4th	Revision

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-: LESSON PLAN:

Disciplina		Canana	~44. 4
Discipline:		Name of the teaching faculty: Debadarta Samanto Semester 444 from date: No. Of weeks:- To Date: 23. 05-23	The state of the s
Subject.		& Sudeepta Chattarosi	7
TOIM	No. Of	Semester 4A4	
	days / per week	from date: / 14.82:23 To Date: 23.65-22	
-	allotted:- 69	No. Of weeks:- 15	
	69		
Week			
WEEK	Class day	Theory/ Practical Topics :	
	1st	Simple mechanism	
		Link ,kinematic chain, mechanism, machine	
1 ⁵⁷	2nd	Inversion, four bar link mechanism and its inversion	
	3rd		
	3.0	Lower pair and higher pair	
	4th	Lower pair and higher pair	
	1st	and ingited per	
	131	Cam and followers	
2 ND	2nd	Company I C II	
25		Cam and followers	
	3rd .	Friction between nut and screw for square thread, screw jack	
	4th		
		Friction between nut and screw for square thread, screw jack	
	1st	Bearing and its classification, Description of roller, needle roller& ball	
-		Dearings	
RD	2nd	Bearing and its classification, Description of roller, needle roller& ball	
-	3rd	bearings	
	510	Torque transmission in flat pivot& conical pivot bearings.	
	4th	Torque transmission in flat pivot& conical pivot bearings.	
	1st		
	15t	Flat collar bearing of single and multiple types	
	2ncl	Torque transmission for single and multiple clutches	
		, and the subject of the month of the control of th	
3	lr d	Working of simple frictional brakes	
4	th	Wasting Co. L. Co.	Ĭ
		Working of simple frictional brakes	
1	st	Working of Absorption type of dynamometer	

		Determine belt thickness and width for given permissible stress for open
	3rd	Determine belt thickness and width for given permitting belt thickness.
		and crossed belt considering centrings term of the permissible stress for open. Determine belt thickness and width for given permissible stress for open.
	4th	Determine belt thickness and width for given permission. and crossed belt considering centrifugal tension.
		and crossed Dell Collisioning
	1st	V-belts and V-belts pulleys
		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	2nd	Concept of crowning of pulleys.
7 TH		
	3rd	Concept of crowning of pulleys.
		L'he torminology.
	4th	Gear drives and its terminology.
	4 - 1 - 1 - 1 - 1 - 1 - 1	Gear trains, working principle of simple, compound, reverted and
	1st	Gear trains, working principle of simple, company
		epicyclic gear trains. Function of governor
8 TH	2nd	Function of governor
8		ol "" it a of governor
	3rd	Classification of governor
	0.41	Working of Watt, Porter, Proel and Hartnell governors.
	4th	Working of Watt, Forter, Froet and Heren g
	1st	Working of Watt, Porter, Proel and Hartnell governors.
	151	
	2nd	Conceptual explanation of sensitivity, stability and isochronisms.
9 TH	12,10	
	3rd	Conceptual explanation of sensitivity, stability and isochronisms.
	4th	Function of flywheel.
		·
	1st	Function of flywheel.
		flushed 8 governor
TH	2nd	Comparison between flywheel &governor.
10 TH		The traction of an army and coefficient of fluctuation of speed
4	3rd .	Fluctuation of energy and coefficient of fluctuation of speed.
	411	Concept of static and dynamic balancing
	4th	Concept of Static and dynamic balances
	1.04	Concept of static and dynamic balancing
	1st	
11 TH	2nd	Static balancing of rotating parts.
	2110	
	3rd	Principles of balancing of reciprocating parts.
	Sid	
	4th	Causes and effect of unbalance.
	160	

	1st	Difference between static and dynamic balancing	
12 TH	2nd	Difference between static and dynamic balancing	
	3rd	Revision	
	4th	Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)	
	1st	(Amplitude, time period and frequency, cycle)	
13 TH	2nd	Amplitude, time period and frequency, cycle)	
	3rd	Classification of vibration.	
	4th	Classification of vibration.	
	1st	Basic concept of natural, forced & damped vibration	
14 TH	2nd	Basic concept of natural, forced & damped vibration	
	3rd	Torsional and Longitudinal vibration.	
	4th	Torsional and Longitudinal vibration.	
15 [™]	1st	Causes & remedies of vibration.	
	2nd	Causes & remedies of vibration.	
	3rd	Revision	
	4th	Revision	

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