ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

Dicipline: Mechanical	Semester: 4th	Name of the Teaching Faculty: Brijanandan Mishra	
Subject: TOM	No of Days/Week Class Allotted: 4	Semester From date: 13.02.23 To date 23.05.23	No.of Weeks:

WEEK	Class Day	Theory Topics
1st	1st	Link, kinematic chain, mechanism, machine
	2nd	Inversion, four bar link mechanism and its inversion
	3rd	Lower pair & higher pair
	4th	Cam & followers
	5th	
2nd	1st	Torque transmission in flat pivot & conical pivot bearings.
	2nd	Flat collar bearing of single & multiple types
	3rd	Torque transmission for single & multiple clutches
	4th	working of simple frictional breakes.
	5th	
3rd	1st	Friction between nut and screw for square thread & square jack.
	2nd	working of absorption types of dynamometer.
	3rd	Concept of power transmission
	4th	Type of drives, belt, gear & chain drive.
	5th	

WEEK	Class Day	Theory Topics
4th	1st	Computation of velocity ratio, length of belt with & without slip.
	2nd	Ratio of belt tensions, centrifugal tension & initial tension.
	3rd	Power transmitted by the belt
	4th	V-belts & V-belts pulleys.
	5th	Concept of crowning of pulleys.
5th	1st	Gear drives & its terminology
	2nd	Gear trains, working principle of simple, compound, reverted & epicyclic gear trains
	3rd	function of governor
	4th	classification of governor
	5th	
6th	1st	Working of watt, porter, proel & hartnell governors.
	2nd	comparison between flywheel & governor
	3rd	fluctuation of energy & coefficient of fluctuation speed
	4th	Concept of static & dynamic balancing
	5th	

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WEEK	Class Day	Theory Topics
7th	1st	Static balancing of rotating parts.
	2nd	Principles of balancing of reciprocating parts.
	3rd	Causes & effect of unbalance
	4th	Difference between static & dynamic balancing
	5th	
8th	1st	Introduction to vibration & related terms (Amplitude time period & frequency, cycle)
	2nd	classification of vibration
	3rd	Basic concept of natural, forced & damped vibration
	4th	Torsional & Longitudinal vibration.
	5th	
9th	1st	Causes & remedies of vibration.
	2nd	composition of various tool materials.
	3rd	physical properties & uses of such tool material
	4th	Turning tool geometry & Purpose of tool angle.
	5th	

WEEK	Class Day	Theory Topics
10th	1st	Machining Process Parameters (speed, feed & depth of cut)
	2nd	Coolants & lubricants in machining & Purpose
	3rd	Major components of a lathe & their function.
	4th	Safety measures during machining
	5th	
11th	1st	Different with respect to engine lathe
	2nd	Major components & their function
	3rd	Define multiple tool holders.
	4th	Difference with respect to capstan lathe
	5th	
12th	1st	major components & their function
	2nd	Potential application areas of a shaper machine.
	3rd	major components & their function
	4th	Explain the automatic able feed mechanism
	5th	

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Mechanical	Semester: 4th	Name of the Teaching Faculty: [illegible]	
	No of Days/Week Class Allotted: 4	Semester From date: 13.02.23 To date 23.05.23	No of Weeks:

WEEK	Class Day	Theory Topics
13th	1st	Explain the construction & working of tool head
	2nd	Explain the quick return mechanism through sketch
	3rd	State the specification of a shaping machine.
	4th	The table drive mechism
	5th	
14th	1st	Working of tool & tool support
	2nd	clamping of work through sketch.
	3rd	Explain work holding attachment
	4th	Procedure of simple & compound indexing
	5th	
15th	1st	Illustration of different indexing methods
	2nd	construction of working of slotter machine
	3rd	Define of hydrostatic pressure
	4th	Total pressure & centre of pressure on immersed
	5th	