

GOVERNMENT POLYTECHNIC MAYURBHANJ LESSONPLAN -2022/23(W)

discipline: MECHANICAL ENGINEERING		semester : 5th		name of the teaching faculty : DEBENDRA JENA
subject : MECHATRONICS		No. of days per week classified:02		semester from date:15.09.22 To 21.01.2023
MONTH	WEEK	DAY	UNIT	TOPICS
September	3rd	1st	UNIT-1	Definition of Mechatronics
		2nd		Advantages & disadvantages of Mechatronics
		3rd		Application of Mechatronics,Scope of Mechatronics in Industrial Sector
		4th		Components of a Mechatronics System
	4th	1st	UNIT-2	Importance of mechatronics in automation
		2nd		Defination of Transducers
		3rd		Classification of Transducers
		4th		Electromechanical Transducers,Transducers Actuating Mechanisms
OCTOBER	1st	1st	UNIT-2	Displacement & Positions Sensors
		2nd		Velocity, motion, force and pressure sensors
		3rd		Temperature and light sensors
		4th		Machine, Kinematic Link, Kinematic Pair
	2nd	1st	UNIT 3	Mechanism, Slider crank Mechanism
		2nd		Gear Drive, Spur gear, Bevel gear, Helical gear, worm gear
		3rd		Belt & Belt drive
		4th		Bearings
	4th	1st	UNIT 3	Switches and relay,Solenoid
		2nd		D.C Motors,A.C Motors
		3rd		Stepper Motors,Specification and control of stepper motors,Servo Motors D.C & A.C
		4th		CLASS TEST -1
NOVEMBER	1st	1st	UNIT 4	CLASS TEST -1
		2nd		PROGRAMMABLE LOGIC CONTROLLERS(PLC) Introduction
		3rd		Advantages of PLC,Selection and uses of PLC
		4th		Architecture basic internal structures
	2nd	1ST	UNIT 4	Input/output Processing and Programming,Mnemonics
		2nd		Master and Jump Controllers
		3rd		Introduction to Numerical Control of machines and CAD/CAM
		4th		NC machines,CNC machines
	3rd	1st	UNIT 4	CAD,CAM
		2nd		Software and hardware for CAD/CAM,
		3rd		INTERNAL EXAM
		4th		INTERNAL EXAM
	4th	1st	UNIT 4	Software and hardware for CAD/CAM
		2nd		Features and characteristics of CAD/CAM system
		3rd		Application areas for CAD/CAM
		4th		elements of CNC machines -Introduction

DECEMBER	1st	2nd	Unit 5	Machine Structure
		3rd		Machine Structure
		4th		Guideways/Slide ways
		1st		Guideways/Slide ways
	2nd	2nd		Introduction and Types of Guideways
		3rd		Factors of design of guideways
		4th		Spindle drives
		1st		Feed drive
	3rd	2nd		Revision of Unit 5
		3rd		Definition, Function and laws of robotics
		4th		Types of industrial robots
		4th		Types of industrial robots
JANUARY	1st	1st	Unit 6	Robotic systems
		2nd		Robotic systems
		3rd		Advantages and Disadvantages of robots
		4th		Advantages and Disadvantages of robots
	2nd	1st		Revision of Unit 6
		4th		All chapter doubt solveing
		1st		Previous year question paper discussion
		2nd		CLASS TEST -2
	3rd	3rd		CLASS TEST -2
		4th		Previous year question paper discussion