

GOVERNMENT POLYTECHNIC MAYURBHANJ LESSONPLAN -2023/24(W)

discipline: MECHANICAL ENGINEERING		semester : 5th	name of the teaching faculty : BHRUGUPATI HANSDAH		
subject : MECHATRONICS		No. of daysper week classified:02	semester from date:1.08.23 To 30.11.2023		
MONTH	WEEK	DAY	UNIT	TOPICS	
August	1st	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	
	2nd	1st	UNIT-2	Importance of mechatronics in automation	
		2nd		Defination of Transducers	
		3rd		Classification of Transducers	
		4th		Electromechanical Transducers,Transducers Actuating Mechanisms	
	3rd	1st	UNIT 3	Displacement &Positions Sensors	
		2nd		Velocity, motion, force and pressure sensors	
		3rd		Temperature and light sensors	
		4th		Machine, Kinematic Link, Kinematic Pair	
	4th	1st	UNIT 3	Mechanism, Slider crank Mechanism	
		2nd		Gear Drive, Spur gear, Bevel gear, Helical gear, worm gear	
		3rd		Belt & Belt drive	
		4th		Bearings	
1st	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		
September	2nd	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	
	3rd	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	
	4th	1st	UNIT 4	CAD,CAM	
		2nd		Software and hardware for CAD/CAM,	
		3rd		INTERNAL EXAM	
		4th		Software and hardware for CAD/CAM	
October	1st	1st	UNIT 5	Features and characteristics of CAD/CAM system	
		2nd		Application areas for CAD/CAM	
		3rd		elements of CNC machines -Introduction	
		4th		Machine Structure	
	2nd	1st		UNIT 5	Machine Structure
		2nd			Guideways/Slide ways
		3rd			Guideways/Slide ways
		4th			Introduction and Types of Guideways
	4th	1st		UNIT 5	Factors of design of guideways
		2nd			Spindle drives
		3rd			Feed drive
		4th			Spindle and Spindle Bearings
1st	1st	UNIT 5	Definition, Function and laws of robotics		
	2nd		Definition, Function and laws of robotics		
	3rd		Types of industrial robots		
	4th				
		1st			

November	2nd	2nd	Unit 6	Types of industrial robots
		3rd		Robotic systems
		4th		Advantages and Disadvantages of robots
	3rd	1st		PREVIOUS YEAR QUESTION DISCUSSION
		2nd		PREVIOUS YEAR QUESTION DISCUSSION
		3rd		CLASS TEST -2
		4th		CLASS TEST -2