

GOVERNMENT POLYTECHNIC MAYURBHANJ LESSONPLAN -2021/22(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:1.10.21 To 8.1.2022		
MONTH	WEEK	DAY	UNIT	TOPICS	
OCTOBER	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	
	4th	1st	UNIT-2	Displacement & Positions Sensors	
		2nd		Velocity, motion, force and pressure sensors	
		3rd		Temperature and light sensors	
		4th		Machine, Kinematic Link, Kinematic Pair	
NOVEMBER	1st	1st	UNIT 3	Mechanism, Slider crank Mechanism	
		2nd		Gear Drive, Spur gear, Bevel gear, Helical gear, worm gear	
		3rd		Belt & Belt drive	
		4th		Bearings	
	2nd	1st		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	
	3rd	1st		CLASS TEST -1	
		2nd		CLASS TEST -1	
		3rd		PROGRAMMABLE LOGIC CONTROLLERS(PLC) Introduction	
		4th		Advantages of PLC, Selection and uses of PLC	
	4th	1ST		UNIT 4	Architecture basic internal structures
		2nd			Input/output Processing and Programming, Mnemonics
		3rd			Master and Jump Controllers
		4th			Introduction to Numerical Control of machines and CAD/CAM
	1st	1st		UNIT 5	NC machines, CNC machines
2nd			CAD, CAM		
3rd			Software and hardware for CAD/CAM,		
4th			INTERNAL EXAM		
2nd		1st	Software and hardware for CAD/CAM		
		2nd	Features and characteristics of CAD/CAM system		
		3rd	Application areas for CAD/CAM		

DECEMBER	3rd	1st	Unit 6	elements of CNC machines -Introduction
		2nd		Machine Structure
		3rd		Guideways/Slide ways
		4th		Introduction and Types of Guideways,Factors of design of guideways
	4th	1st		Spindle drives,Feed drive
		2nd		Spindle and Spindle Bearings, Master and Jump Controllers
		3rd		Definition, Function and laws of robotics
		4th		Types of industrial robots
JANUARY	1st	1st	Robotic systems	
		2nd	Advantages and Disadvantages of robots	
		3rd	previous year question discussion	
		4th	CLASS TEST -2	