

PNS SCHOOL OF ENGGINERING & TECHNOLOGY
LESSON PLAN

Discipline : Mechanical	Semester: 5TH	Name of the Teaching Faculty : ER. SANYSI SWAIN
Subject : MECHATRONICS	No. of Days / per week class allotted : 5	Semester From date : 01.08.2023 to Date :30.11.2023 No. of Weesks : 14
Week	Class Day	Topics
1ST	1st	Definition of Mechatronics
	2nd	Advantages & disadvantages of Mechatronics
	3rd	Application of Mechatronics
	4th	Scope of Mechatronics in Industrial Sector
	5th	Imporatant question discussion
2ND	1st	Components of a Mechatronics System
	2nd	Importance of mechatronics in automation
	3rd	Defination of Transducers
	4th	Classification of Transducers
	5th	Imporatant question discussion
3RD	1st	Electromechanical Transducers
	2nd	Transducers Actuating Mechanisms
	3rd	Displacement & Positions Sensors , Velocity, motion, force and pressure sensors.
	4th	Temperature and light sensors
	5th	Imporatant question discussion
4TH	1st	Machine, Kinematic Link, Kinematic Pair
	2nd	Mechanism, Slider crank Mechanism
	3rd	Gear Drive, Spur gear, Bevel gear, Helical gear, worm gear
	4th	Belt & Belt drive
	5th	Imporatant question discussion
5TH	1st	BEARINGS
	2nd	Switches and relay
	3rd	Solenoid
	4th	D.C Motors
	5th	Imporatant question discussion
6TH	1st	A.C Motors
	2nd	Stepper Motors
	3rd	Specification and control of stepper motors
	4th	Servo Motors D.C & A.C
	5th	Imporatant question discussion
7TH	1st	Introduction
	2nd	Advantages of PLC
	3rd	Selection and uses of PLC
	4th	Architecture basic internal structures
	5th	Imporatant question discussion
	1st	Input/output Processing and Programming

8TH	2nd	Mnemonics
	3rd	Master and Jump Controllers
	4th	Master and Jump Controllers
	5th	Imporatant question discussion
9TH	1st	NC machines
	2nd	CNC machines
	3rd	CAD/CAM
	4th	CAD
	5th	Imporatant question discussion
10TH	1st	CAM
	2nd	Software and hardware for CAD/CAM
	3rd	Functioning of CAD/CAM system
	4th	Features and characteristics of CAD/CAM system
	5th	Imporatant question discussion
11TH	1st	Application areas for CAD/CAM
	2nd	ntroduction
	3rd	Machine Structure
	4th	Guideways/Slide ways
	5th	Imporatant question discussion
12TH	1st	Introduction and Types of Guideways
	2nd	Factors of design of guideways
	3rd	Spindle drives
	4th	Feed drive
	5th	Imporatant question discussion
13TH	1st	Spindle and Spindle Bearings
	2nd	Definition, Function and laws of robotics
	3rd	Types of industrial robots
	4th	Robotic systems
	5th	Imporatant question discussion
14TH	1st	Advantages and Disadvantages of robots
	2nd	REVISION
	3rd	REVISION
	4th	REVISION

Signature of HOD, Mechanical

Signatue of Lecturer