

Specimen of lesson Plan

Name of the Faculty :Varunendra Kumar Singh

Discipline :Instrumentation and control

Semester :5th

Subject :PLC

Lesson Plan Duration : 15 weeks(Aug 2024 to Dec 2024) **Lect-3 Pract:-4**

Week		Theory		Practicals
	Lecture Day	Topic (including)	Practical	Topic
1st	1st	Brief introduction about subject and syllabus	1st	Components/sub-components of a PLC, Learning functions of different modules of a PLC system
	2nd	What is PLC	2nd	
	3rd	concept of PLC	3rd	
	4th	revision		
2nd	5th	Building blocks of PLC	4th	Installation of PLC software and Interfacing of PLC with PC
	6th	Functions of various	5th	
	7th	limitations of relays	6th	
3rd	9th	Advantages of PLCs over electromagnetic relays.	7th	Practical steps in programming a PLC (a) using a hand held programmer (b) using computer interface
	10th	Different programming	8th	
	11th	PLC Specification		
	12th	revision		
4th	13th	Working of PLC	10th	Introduction to ladder diagram symbols, instruction list syntax
	14th	Basic operation and	11th	
	15th	Scan Cycle	12th	
	16th	revision		
5th	17th	Memory structures,	13th	Basic logic operations, AND, OR, NOT functions
	18th	revision	14th	
	19th	I/O structure	15th	
	20th	revision		
6th	21th	Basic instructions : latch	16th	Logic control systems with time response as applied to Traffic light control
	22th	Master control self	17th	
	23th	Timer instruction like	18th	
	24th	resetting of timers.		
7th	25th	Counter instructions like	19th	Sequence control system e.g. in lifting a device for packaging and Counting
	26th	Class Test	20th	
	27th	down counter,	21st	
	28th	resetting of counters.		
8th	29th	Arithmetic Instructions : Assignment	22nd	Ladder diagram for Motor Speed Control
	30th	Copy Checking	23rd	
	31st	Arithmetic Instructions :	24th	
	32nd	MOV instruction		
9th	33rd	Revision	25th	Demonstration of Conveyor Belt System
		Revision		

	34th	RTC(Real Time Clock	26th	
	35th	Watch Dog Timer	27th	
	36th	revision		
10th	37th	Comparison instructions like equal,	28th	Ladder diagram for Water level Control or Reaction Vessel
	38th	not equal, greater, greater than equal, less	29th	
	39th	Programming : timer using	30th	
	40th	Programming : comparison instructions		
11th	41th	Programming : counter using	31st	Ladder diagram for Star delta starter interface
	42th	revision	32nd	
	43th	revision	d	
	44th	Concept of DDC		
12th	45th	Introduction to DCS	34th	Practical steps for automatic bottle filling, capping and labeling process
	46th	Block Diagram of DCS	35th	
	47th	I/O Hardware	36th	
	48th	Advantages of DCS in operation and safety		
13th	49th	Assignment	37th	Practical steps for working of lift control through PLC
	50th	Revision	38th	
	51st	Block Diagram and	39th	
	52nd	Applications of SCADA in the field of		
14th	53rd	Introduction to RTU	40th	Make a practical animation for Elevator using SCADA Software
	54th	Introduction to HMI and		
	55th	Difference between DCS	41st	
	56th	Copy Checking	42nd	
15th	57th	Copy Checking	43rd	Viva-voice
	58th	Revision	44th	
	59th	Revision		
	60th	Revision	45th	

