



# SSM Institute of Engineering and Technology

Sindalagundu post, Dindigul- 624-002, Tamilnadu ph:0451-2448800  
( Approved by AICTE, Affiliated to Anna University, Chennai Accredited by NAAC)

## Department of Electrical and Electronics Engineering Organizes

*Five days Technology Training Program on  
" Industrial Automation"*

For III year students of EEE  
from (09.05.2022 to 13.05.2022)

**Trained by**

*Shree Technologies Private Limited, Coimbatore*

**Co-ordinators**

Mr.D.Manoj,AP/EEE  
Mr.P.Siva Subramanian,AP/EEE

**HoD**

Dr.G.Mohanbabu

**Principal**

Dr.D.Senthil Kumaran

**All are Invited**

From

Dr. G.Mohanbabu,  
Professor & Head,  
Department of Electrical and Electronics Engineering,  
SSM Institute of Engineering and Technology,  
Dindigul-02

To  
The Principal,  
SSM Institute of Engineering and Technology,  
Dindigul-02

Respected Sir,  
Sub: Requesting Approval of conducting Technological Teaching for III Year EEE Students-Reg

The Department of EEE has planned to conduct Technological Teaching for third year students on "Industrial Automation" which is scheduled to be conducted on the month of May 2022. In this regard, I request your permission to conduct this training on the scheduled month. The quotation details, syllabus and Training Schedule are attached with this letter. Kindly do the needful sir.

Name of the Technological Training	Name of the Company	Total Number of Students	No of Hours	Date	Amount	Coordinator/Faculty in Charges
Training on Industrial Automation	PROLIFIC Systems and Technological Pvt. Ltd, Coimbatore	44 (Rs.1200 Per Student)	40	09.05.22 to 13.05.22	Rs.52,800	D.Manoj,A.P/EEE P.Siva Subramanian,A.P/EEE

Resource Person Details:

Mr. K. Ilanchezhian, Manager-Technical

Thanking you.

  
Yours faithfully

(Dr.G.Mohanbabu)



## SSM Institute of Engineering and Technology, Dindigul -02.

### Department of Electrical and Electronics Engineering

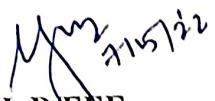
#### CIRCULAR

07.05.2022

*Conducted by*

This is to inform that technology training program ~~on~~ PROLIFIC SYSTEMS & TECHNOLOGIES Pvt Ltd, Coimbatore is going to be conducted for III-year EEE students. Henceforth interested students are informed to register their name to Mr.D.Manoj,AP/EEE.Course Duration: 09.05.2022 to 13.05.2022

  
Faculty Incharge

  
HoD/EEE  
09.05.2022



(International Accreditation  
Organisation - USA)  
Accredited Courses

An ISO 9001-2008  
Certified Co.

(Govt. of India) Approved  
Training Company

Topics Covered

### ➤ Programmable Logic Controllers (PLC)- Advance

#### Introduction to PLC

Topic

- Introduction to PLC hardware and role in automation
- Architectural Evolution of PLC
- Introduction to the field devices attached to PLC
- PLC Fundamentals – (Block diagram of PLC's)
- Detail information about PLC components
  - Power supply, CPU, I/Os, Communication bus
- Various ranges available in PLC's
- Types of Inputs & outputs / Source Sink Concepts
- Wiring of the I/O devices
- Concept of flags
- Scan cycle execution

Mode

Presentation and physical observations

Practical demonstration on hardware

Practical on PLCs

Practical on PLCs

#### Operation and Maintenance of PLC

Topic

- Setting up PLCs / Connecting CPU, I/O modules, Rack, Backplane and Communication bus
- Connecting Field devices to PLCs I/Os
- Installing and to starting the programming terminals
- Identifying the status of PLC and communication bus
- Fault detection and error handling
- Forcing of the I/O's
- Back up of the programs and reloading
- CPU, I/O module replacements

Mode

Practical – Assembling PLC

Practical –Physical wiring

Practical – Installation of software

Practical on PLCs

Practical on PLCs

Practical on Software

Practical on PLCs

Practical on PLCs

## Allenbradley (AB)

### **Operation and Maintenance of PLC**

<b>Topic</b>	<b>Mode</b>
➤ Setting up PLCs / Connecting CPU, I/O modules, Rack, Backplane and Communication bus	Practical – Assembling PLC
➤ Connecting Field devices to PLCs I/Os ➤ Configuring Local 1756-I/O Modules	Practical –Physical wiring
➤ Connecting a Computer to a Communications Network	
➤ Installing and to starting the programming terminals ➤ Creating & Modifying an RSLogix new project ➤ Transferring a Project File to a Logix500 Controller	Practical – Installation of software
➤ Identifying the status of PLC and communication bus	Practical on PLCs
➤ Creating Tags & Monitoring Data in an RSLogix 500 Project ➤ Forcing of the I/O's	Practical on Software
➤ Managing RSLogix 500 Project Files ➤ Back up of the programs and reloading	Practical on PLCs

### **Programming / Project Development**

<b>Ladder Logic Programming/Interpretation</b>	Practical – Programming terminal
➤ Identifying Programming Strategies & Techniques <ul style="list-style-type: none"> <li>▪ Documenting &amp; Searching Ladder Logic</li> <li>▪ Programming N/o,N/c Instructions</li> <li>▪ Programming Timer &amp; Counter Instructions</li> <li>▪ Programming Program Control Instructions</li> <li>▪ Programming Compare Instructions</li> <li>▪ Programming Compute &amp; Math Instructions</li> <li>▪ Programming Move Instructions</li> <li>▪ Programming with Advance Instruction Set</li> </ul>	
➤ Introduction to industrial networking ➤ Identifying Industrial Networks for Use in a RSLogix500 System	Theory session

## Supervisory Control & Data Acquisition Software (Wonder ware InTouch 10.0)

### Topics Covered

- Applications of SCADA software
- Different packages available with I/O structure
- Features of SCADA software
- Creating a new SCADA application
- Creating Database of Tags
- Creating & Editing graphic display with animation
  - ✓ Data Entry
  - ✓ Start Stop command
  - ✓ Analog entry
  - ✓ Sizing,
  - ✓ Movement,
  - ✓ Blinking,
  - ✓ Visibility, Filling
- Trending
  - ✓ Creating & Accessing Real-time
  - ✓ Creating & Accessing Historical Trends
- Creating and Accessing Alarms
- Creating and Accessing Events
- Writing logic through script
- Window script
- Application script
- Writing script on industrial application
- Bottle filling plant
- Process automation plant
- Connectivity with the different hardware
  - ✓ Communication protocols
  - ✓ Communication with PLC
  - ✓ Connectivity between software
- Troubleshooting the application
  - ✓ Fault diagnostics and error handling
  - ✓ Sorting communication problems

## Programmable Logic Controllers (PLC) –Delta PLC

### Topics Covered

#### Programming / Project Development

Topic	Mode
➤ SIMATIC S7 PLC Functionalities ➤ Setting up Delta PLC hardware	Practical on PLC's
➤ Programming software <ul style="list-style-type: none"><li>▪ PLC program structure in delta</li><li>▪ The instruction set of WPL Soft</li><li>▪ Parameters, functions and tools</li></ul>	Practical – PLC programming software
➤ CPU configuration, setting parameters and application of several I/O cards using the software	Practical – PLC programming software
➤ Addressing Concepts in Delta PLC's ➤ Detail information about Organizational Blocks, Function Block, Functions, System Function Block, System Function, Data block	Practical – PLC programming software
➤ Creating and Editing PLC programs ➤ Introduction to Bit Byte and Word Concept	Practical – PLC programming software
➤ Programming instructions arithmetic and logical <ul style="list-style-type: none"><li>▪ Load /and /or/out / and Read / Write</li><li>▪ Compare / Add / Sub /And /Or – Blocks</li><li>▪ Leading edge / trailing edge instructions</li><li>▪ MOVE block application</li></ul>	Practical – PLC programming software
➤ Programming instructions arithmetic and logical <ul style="list-style-type: none"><li>▪ Timer Blocks programming</li><li>▪ Counter Block programming</li><li>▪ Comment functions</li><li>▪ Comments in the PLC programs</li><li>▪ Handling Analog I/Ps</li></ul>	Practical – PLC programming software

## **VFD – Variable Frequency Drives**

### **Variable Speed Drives**

- Introduction to Ac Drives
- Selection Criteria Of Drives
- Configuration Of Parameter
- Remote And Local Operation
- Communication With PLC/SCADA software
- Troubleshooting
- Case Study And Different Applications Of Drives In The Industry

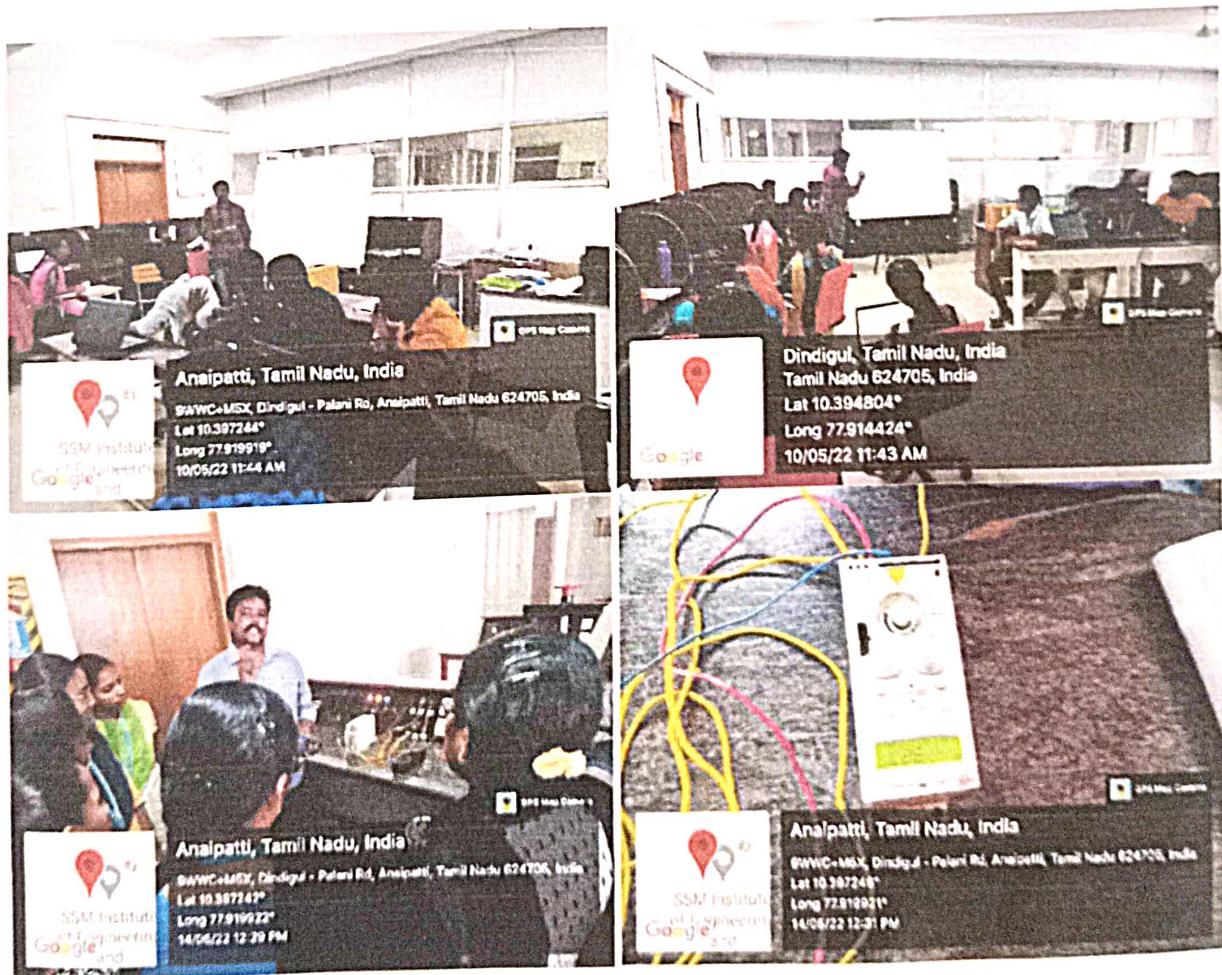


# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Sindalagundu post, Dindigul-624 002, Tamilnadu. Ph: 0451-2448800  
(Approved by AICTE, Affiliated to Anna University, Chennai Accredited by NAAC)

## Summary Report

The department of Electrical and Electronics Engineering, SSM Institute of Engineering and Technology conducted **Technology training on Industrial Automation** from 9<sup>th</sup> May 2022 to 13<sup>th</sup> May 2022. The course covered topics including Introduction to PLC, Operation and Maintenance of PLC, Programming and Project Development, Applications of SCADA software, Different packages available with I/O structure, Features of SCADA software. Students have attended assessment tests at the end of the course and certificates were issued. The students from third year EEE attended the course and got benefitted.



**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
**Department of Electrical and Electronics Engineering**  
**III year Name List Batch: 2019-2023**

S. No	Register Number	Name
1	922119105001	ABINAYA S S
2	922119105002	ANIESH ANGEL A
3	922119105003	ARUL NITHISH KUMAR R
4	922119105004	BEBINA RITHIKA J
5	922119105005	BRUMMA THAMO THARAN M
6	922119105006	DHEEPAN KUMAR G
7	922119105007	DHILIP LAKSHMAN V
8	922119105008	ESHWAR J
9	922119105009	GNANA AROCKYA AMALI B
10	922119105010	GOKULA PANDIYAN A
11	922119105011	HARINI M
12	922119105012	HARIKRASATH S
13	922119105013	HEMALATHA S
14	922119105014	KARTHIKEYAN B
15	922119105016	KRISHNA LEELA S
16	922119105017	MANJULA S
17	922119105018	MANOJ KUMAR A
18	922119105019	MOHAMMED HAFEEZ A
19	922119105020	MOHAMMED JAVITH S
20	922119105021	MOUNA JOTHI M
21	922119105022	MUTHUKUMAR R
22	922119105023	NAGARANI M
23	922119105024	NASEER HUSSAIN S
24	922119105025	PRAKASH T
25	922119105026	PREETHIKA J
26	922119105027	PUNITHA VIJAYASRI P
27	922119105028	RAJESH MANI K
28	922119105029	RESHMA P
29	922119105030	RISHIKARAN
30	922119105031	ROBIN NICHOLAS S
31	922119105032	SANGAVI SRI M
32	922119105033	SARAVANAN R
33	922119105034	SHAGIL P
34	922119105035	SHALINI T
35	922119105036	SIVASUBRAMANI S
36	922119105037	SRI VARSHAN K
37	922119105038	SURIYA SELVAM I
38	922119105039	VAISHNAVI C
39	922119105040	VINITH PRAVEEN KUMAR V
40	922119105041	VINOOTH KUMAR S

**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
**Department of Electrical and Electronics Engineering**  
**III year Name List Batch: 2019-2023**

41	922119105042	VISWAA J
42	922119105301	AKASH A
43	922119105302	BAVADHARANI U
44	922119105303	BHARATHKUMAR K

  
Faculty In-charge

  
HoD/EEE

Industrial Automation

S.No	Register Number	Name of the Student	09.05.22	10.05.22	11.05.22	12.05.22	14.05.22
			FN	AN	FN	AN	FN
1	922119105001	ABINAYA S S	✓	✓	✓	✓	✓
2	922119105002	ANIESH ANGEL A	✓	✓	✓	✓	✓
3	922119105003	ARUL NITHISH KUMAR R	✓	✓	✓	✓	✓
4	922119105004	BEBINA RITHIKA J	✓	✓	✓	✓	✓
5	922119105005	BRUMMA THAMOTHARAN M	✓	✓	✓	✓	✓
6	922119105006	DHEEPANKUMAR G	✓	✓	✓	✓	✓
7	922119105007	DHILIP LAKSHMAN V	✓	✓	✓	✓	✓
8	922119105008	ESHWAR J	✓	✓	✓	✓	✓
9	922119105009	GNANA AROCKYA AMALI B	✓	✓	✓	✓	✓
10	922119105010	GOKULA PANDIYAN A.	✓	✓	✓	✓	✓
11	922119105011	HARINIM	✓	✓	✓	✓	✓
12	922119105012	HARI PRASATH S	✓	✓	✓	✓	✓
13	922119105013	HEMALATHA S	✓	✓	✓	✓	✓
14	922119105014	KARTHIKEYAN B	✓	✓	✓	✓	✓
15	922119105016	KRISHNA LEELA S	✓	✓	✓	✓	✓
16	922119105017	MANJULAA S	✓	✓	✓	✓	✓
17	922119105018	MANOJ KUMAR A	✓	✓	✓	✓	✓
18	922119105019	MOHAMMED HAFEEZA A	✓	✓	✓	✓	✓
19	922119105020	MOHAMMED JAVITH S	✓	✓	✓	✓	✓
20	922119105021	MOUNAJOTHI M	✓	✓	✓	✓	✓
21	922119105022	MUTHU KUMAR R	✓	✓	✓	✓	✓
22	922119105023	NAGARANI M	✓	✓	✓	✓	✓
23	922119105024	NASEER HUSSAIN S	✓	✓	✓	✓	✓
24	922119105025	PRAKASH T	✓	✓	✓	✓	✓
25	922119105026	PREETHIKA J	✓	✓	✓	✓	✓
26	922119105027	PUNITHA VIJAYASRI P	✓	✓	✓	✓	✓
27	922119105028	RAJESH MANI K	✓	✓	✓	✓	✓
28	922119105029	RESHMA P	✓	✓	✓	✓	✓
29	922119105030	RISHIKARAN R	✓	✓	✓	✓	✓
30	922119105031	ROBIN NICHOLAS S	✓	✓	✓	✓	✓
31	922119105032	SANGAVI SRUML	✓	✓	✓	✓	✓
32	922119105033	SARAVANAN R	✓	✓	✓	✓	✓

33	922119105034	SHAGIL P
34	922119105035	SHALINI T
35	922119105036	SIVASUBRAMANIS
36	922119105037	SRIVARSHANK
37	922119105038	SURIYA SELVAMI
38	922119105039	VAISHNAVIC
39	922119105040	VINITH PRAVEENKUMAR
40	922119105041	VINOOTHKUMAR S
41	922119105042	VISWAJ
42	922119105301	AKASH A
43	922119105302	BAVADHARANI U
44	922119105303	BHARATHKUMARK

  
9105122

Faculty incharge

  
Trainer

  
M.Tech  
H.O.D & FEE

SHREE TECHNOLOGIES A FRANCHISEES OF  
PROLIFIC SYSTEMS AND TECHNOLOGIES P LTD,  
SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY  
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING  
5DAYS PLC & SCADA TRAINING PROGRAM

maximum:50 marks

Time: 1 Hours

Date:

PART-A (20 X 1=20MARKS)

1. Which Programming Language is commonly used in PLC?

- a)C++      b) Ladder      c) C    d)Java

2. Which One of the Following Communication Cable is used in PLC?

- a)DH-485      b)RS-485      c) RS-232    d)RJ45

3. "Download" describes Transfer from .....

- a) PC to PLC      b) PLC to PC      c) PC to PC d) PLC to PLC

4. "Upload" describes Transfer from .....

- a) PC to PLC      b) PLC to PC c) PC to PC d) PLC to PLC

5. Which one of the following is not associated with AB PLCTimer?

- a) Preset      b)Accumulator      c) Binary Memoryd) Time Base

6. Which Coil Permits the Supply when it is in ON state.

- a) Normally OPEN      b) Normally CLOSE

7. Which one of the following belongs to Input address in AB PLC?

- a) I0.0      b) I: 0/0      c)X0      d)I1

8. Which one of the following belongs to Output address in Delta PLC?

- 2
- a) O:0/0      b) Y:0.0      c) Y0      d) IQ
9. Which one of the following belongs to Timer address in AB PLC?  
a) T0 b) T4:0 c) R0 d) D0
10. Which Coil Doesn't Permits the Supply when it is in ON state.  
a) Normally OPEN      b) Normally CLOSE
11. Which of the following Bit Activates When the Time delay reach Preset Value?  
a) Done Bit b) Timer Timing Bit      c) Enable Bit
12. Accumulator is Used to ..... in Timer.  
a) Display the Changing values b) Set the Time Value  
Choosing the time base      d) Address Assigning
13. Which One of the Following is Used to "Set the Time Value" in timer ?  
a) Preset      b) Accumulator      c) Time Base      d) Address
14. An example of discrete (digital) control is:  
a) Varying the volume of a music system      b) Turning a lamp ON or OFF  
c) Varying the brightness of a lamp      d) Controlling the speed of fan
15. One of the following is an input device.  
a) Motor b) Light      c) Valved) Sensor
16. PLC stands for programmable logo controller.  
a) True      b) False      c) None of the above
17. In a PLC "I:0/0" is used to denote output and "O:0/0" is used for input.  
a) True      b) False      c) None of the above

18. Lights, lamps, motors are connected to:

- a) Analog output   b) Digital output   c) Analog input   d) Digital input

19. What is mean by SCADA?

20. Which software used in scada?

### PART-B (5 X 2= 10 MARKS)

(Answer all Questions)

1. Draw the Ladder Diagram for EX-OR Gate?
2. Draw the Ladder Diagram for AND Gate?
3. Draw the Ladder Diagram For DOL Starter?
4. List the Name of Programming Software, Communication Software and Simulation Software for Allen Bradley PLC?
5. Difference between Electrical and Electronics?

### PART-C (2 X 10=20MARKS)

(Answer all Questions)

1. What is meaning by Automation and Its Types and Its Application?
2. a) If a Switch is Pressed , Light A and Light B ON.  
If the Switch is Released, Light A off, Light B ON.  
b) If a switch is ON, after 5 sec. lamp A- On,  
After 10 sec. Lamp B- On, After 15 sec. Lamp C-On.



## SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Sindlagundu post, Dindigul-624002, Tamilnadu.Ph:0451-2448800

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### TECHNOLOGY TRAINING ON "INDUSTRIAL AUTOMATION"

#### MARK STATEMENT

S. No.	Reg.no.	Student Name	MARK(50)
1	922119105001	ABINAYA S S	30
2	922119105002	ANIESH ANGEL A	28
3	922119105003	ARUL NITHISH KUMAR R	17
4	922119105004	BEBINA RITHIKA J	15
5	922119105005	BRUMMA THAMO THARAN M	20
6	922119105006	DHEEPAN KUMAR G	25
7	922119105007	DHILIP LAKSHMAN V	29
8	922119105008	ESHWAR J	12
9	922119105009	GNANA AROCKYA AMALI B	13
10	922119105010	GOKULA PANDIYAN A	20
11	922119105011	HARINI M	32
12	922119105012	HARIKRASATH S	23
13	922119105013	HEMALATHA S	25
14	922119105014	KARTHIKEYAN B	- [AB]
15	922119105016	KRISHNA LEELA S	10
16	922119105017	MANJULA S	26
17	922119105018	MANOJ KUMAR A	15

S. No.	Reg.no.	Student Name	MARK
18	922119105019	MOHAMMED HAFEEZ A	27
19	922119105020	MOHAMMED JAVITH S	32
20	922119105021	MOUNA JOTHI M	31
21	922119105022	MUTHUKUMAR R	36
22	922119105023	NAGARANI M	36
23	922119105024	NASEER HUSSAIN S	12
24	922119105025	PRAKASH T	10
25	922119105026	PREETHIKA J	8
26	922119105027	PUNITHA VIJAYASRI P	31
27	922119105028	RAJESH MANI K	30
28	922119105029	RESHMA P	24
29	922119105030	RISHIKARAN	20
30	922119105031	ROBIN NICHOLAS S	21
31	922119105032	SANGAVI SRI M	18
32	922119105033	SARAVANAN R	17
33	922119105034	SHAGIL P	15
34	922119105035	SHALINI T	14
35	922119105036	SIVASUBRAMANIS	11
36	922119105037	SRI VARSHAN K	12
37	922119105038	SURIYA SELVAMI	35
38	922119105039	VAISHNAVI C	32
39	922119105040	VINITH PRAVEEN KUMAR V	24
40	922119105041	VINOTH KUMAR S	24
41	922119105042	VISWAA J	23
42	922119105301	AKASH A	26
43	922119105302	BAVADHARANI U	12
44	922119105303	BHARATHKUMAR K	16

FACULTY IN-CHARGE

*Yuvra*  
HOD EEE

SHREE TECHNOLOGIES A FRANCHISEES OF  
PROLIFIC SYSTEMS AND TECHNOLOGIES P LTD,  
SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY  
DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING  
5 DAYS PLC & SCADA TRAINING PROGRAM

Time: 1 Hours

maximum: 50 marks

Date:

PART-A (20 X 1 = 20 MARKS)

36  
50

1. Which Programming Language is commonly used in PLC?

- a) C++      b) Ladder      c) C      d) Java

2. Which One of the Following Communication Cable is used in PLC?

- a) DH-485      b) RS-485      c) RS-232      d) RJ45

3. "Download" describes Transfer from .....

- a) PC to PLC      b) PLC to PC      c) PC to PC      d) PLC to PLC

4. "Upload" describes Transfer from .....

- a) PC to PLC      b) PLC to PC      c) PC to PC      d) PLC to PLC

5. Which one of the following is not associated with AB PLCTimer?

- a) Preset      b) Accumulator      c) Binary Memory      d) Time Base

6. Which Coil Permits the Supply when it is in ON state.

- a) Normally OPEN      b) Normally CLOSE

7. Which one of the following belongs to Input address in AB PLC?

- a) I0.0      b) I: 0/0      c) X0      d) I1

8. Which one of the following belongs to Output address in Delta PLC?

Answer all questions (2 marks)

1) OR gate

X	Y	Z
0	1	1
1	0	0
0	0	0
1	1	1

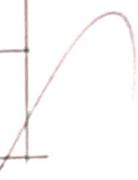
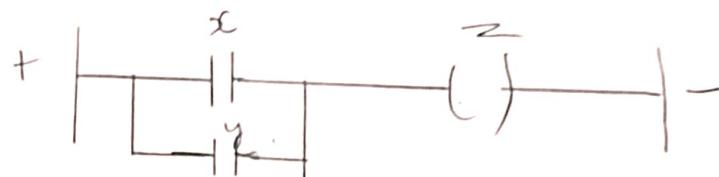


Diagram for OR gate



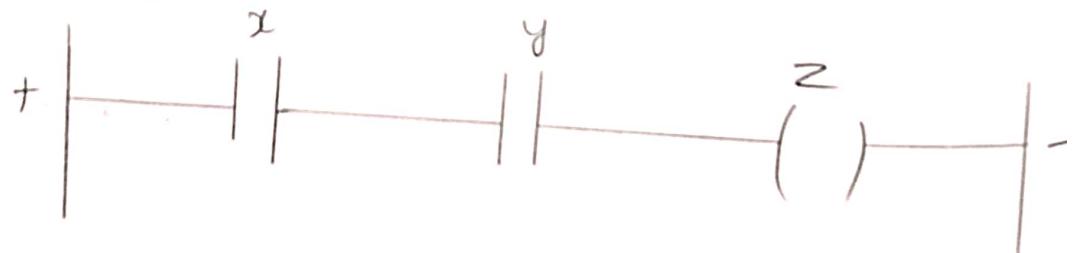
Parallel

2) AND gate

X	Y	Z
1	0	0
0	1	0
0	0	0
1	1	1



Diagram for AND gate



Series Connection

a) Y0

b) Y1:0

Y0

d) I0

9. Which one of the following belongs to Timer address in AB PLC?

T0 b) T4:0 c) R0 d) D0

10. Which Coil Doesn't Permits the Supply when it is in ON state.

a) Normally OPEN  b) Normally CLOSE

11. Which of the following Bit Activates When the Time delay reach Preset Value?

a) Done Bit  b) Timer Timing Bit c) Enable Bit

12. Accumulator is Used to ..... in Timer.

a) Display the Changing values b) Set the Time Value  
 c) Choosing the time base d) Address Assigning

13. Which One of the Following is Used to "Set the Time Value" in timer?

a) Preset  b) Accumulator c) Time Base d) Address

14. An example of discrete (digital) control is:

a) Varying the volume of a music system  
c) Varying the brightness of a lamp  b) Turning a lamp ON or OFF  
d) Controlling the speed of fan

15. One of the following is an input device.

a) Motor b) Light  c) Valve d) Sensor

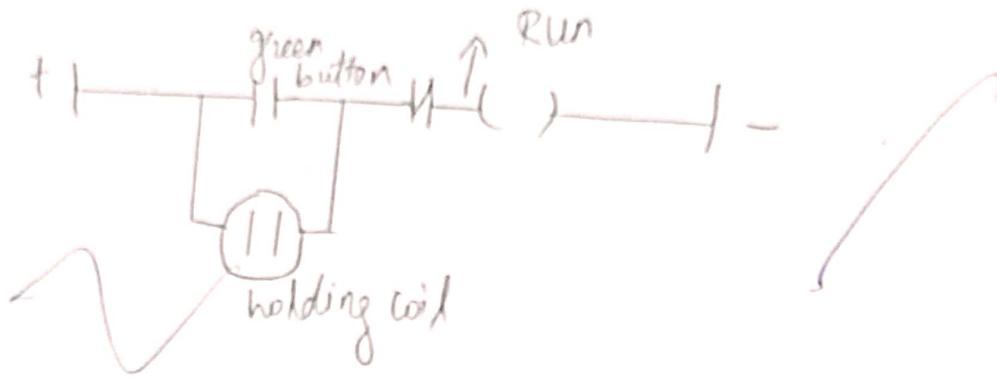
16. PLC stands for programmable logic controller.

a) True  b) False c) None of the above

17. In a PLC "I:0/0" is used to denote output and "O:0/0" is used for input.

a) True  b) False c) None of the above

### 3) DOL Starter



### 4) Allen Bradley :

Programming Software - RS LOGIX 500

Communication Software - RSLinx

Soft Simulation Software - RS LOGIX E

- RS232

Protocol

Input address - I : 0/0

Output address - O : 0/0

Timer address - T4:0 .... T4:255

Counter address - C5:0....C5:25

### 5) Electrical:

It is Connection of a Conductor.

Electronics:

It is a Connection of Semiconductors.

18. Lights, lamps, motors are connected to:

- a) Analog output   b) Digital output   c) Analog input   d) Digital input

19. What is mean by SCADA?

Supervisor Controller and Data Acquisition

20. Which software used in scada?

Intouch wonderware

#### PART-B (5 X 2= 10 MARKS)

(Answer all Questions)

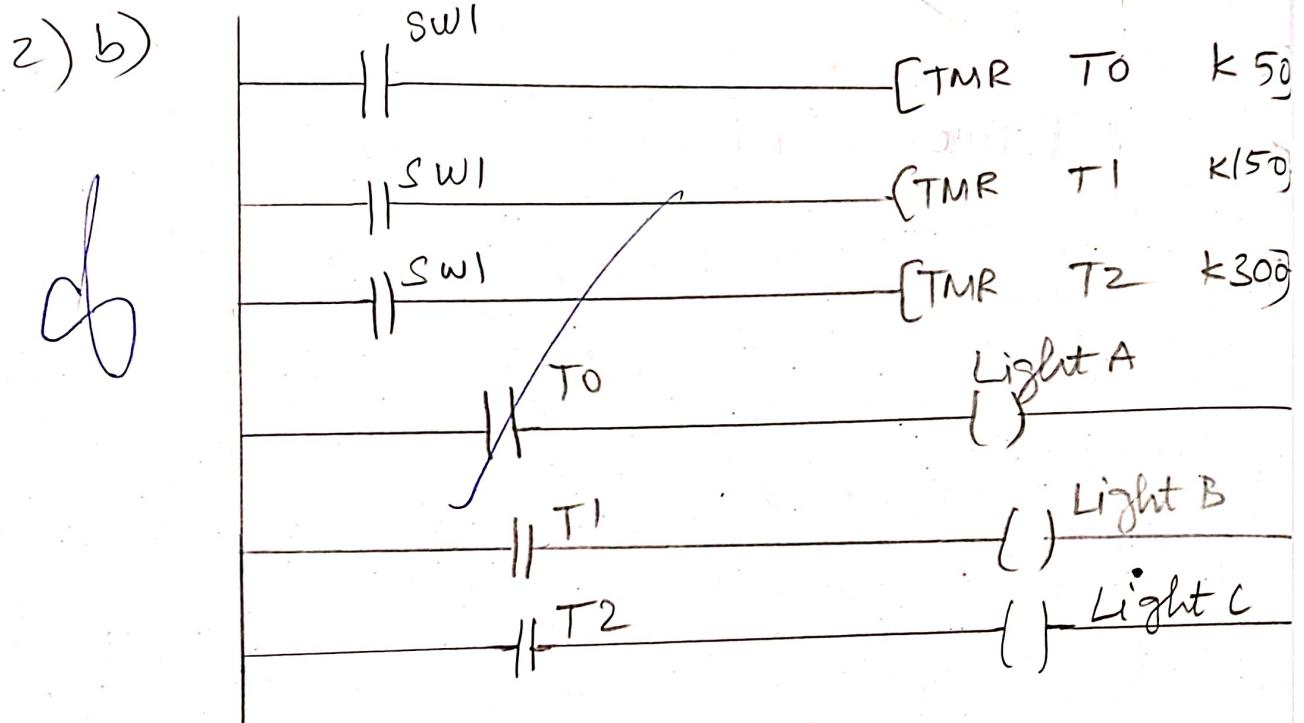
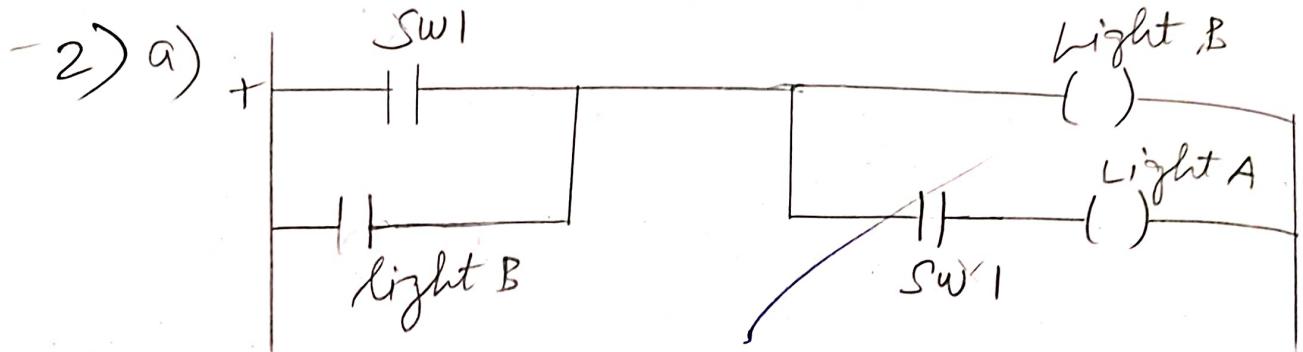
1. Draw the Ladder Diagram for EX-OR Gate?
2. Draw the Ladder Diagram for AND Gate?
3. Draw the Ladder Diagram For DOL Starter?
4. List the Name of Programming Software, Communication Software and Simulation Software for Allen Bradley PLC?
5. Difference between Electrical and Electronics?

#### PART-C (2 X 10=20MARKS)

(Answer all Questions)

1. What is meaning by Automation and Its Types and Its Application?
2. a) If a Switch is Pressed , Light A and Light B ON.  
If the Switch is Released, Light A off, Light B ON.  
b) If a switch is ON, after 5 sec. lamp A- On,  
After 10 sec. Lamp B- On, After 15 sec. Lamp C-On.

# Part - C



922118105011

**SHREE TECHNOLOGIES A FRANCHISEES OF  
 PROLIFIC SYSTEMS AND TECHNOLOGIES P LTD,  
 DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING  
 5DAYS PLC & SCADA TRAINING PROGRAM**

**Time: 1 Hours**

**Date:**

**maximum: 50 marks**

**PART-A (20 X 1=20MARKS)**

1. Which Programming Language is commonly used in PLC?

- a) C++
- b) Ladder**
- c) C
- d) Java

2. Which One of the Following Communication Cable is used in PLC?

- a) DH-485
- b) RS-485**
- c) RS-232
- d) RJ45

3. "Download" describes Transfer from .....

- a) PC to PLC
- b) PLC to PC**
- c) PC to PC
- d) PLC to PLC

4. "Upload" describes Transfer from .....

- a) PC to PLC**
- b) PLC to PC
- c) PC to PC
- d) PLC to PLC

5. Which one of the following is not associated with AB PLC Timer?

- a) Preset
- b) Accumulator
- c) Binary Memory**
- d) Time Base

6. Which Coil Permits the Supply when it is in ON state.

- a) Normally OPEN
- b) Normally CLOSE**

7. Which one of the following belongs to Input address in AB PLC?

- a) I0.0**
- b) I: 0/0
- c) **X0**
- d) II

8. Which one of the following belongs to Output address in Delta PLC?

- a) O:0/0
- b) Y:0.0**
- c) Y0
- d) IQ

9. Which one of the following belongs to Timer address in AB PLC?

a) T0

b) T4:0

c) R0

d) D0

10. Which Coil Doesn't Permits the Supply when it is in ON state.

a) Normally OPEN

b) Normally CLOSE

11. Which of the following Bit Activates When the Time delay reach Pres Value?

a) Done Bit

b) Timer Timing Bit

c) Enable Bit

12. Accumulator is Used to ..... in Timer.

a) Display the Changing values

b) Set the Time Value

c) Choosing the time base

d) Address Assigning

13. Which One of the Following is Used to "Set the Time Value" in timer

a) Preset

b) Accumulator

c) Time Base

d) Address

14. An example of discrete (digital) control is:

a) Varying the volume of a music system

b) Turning a lamp ON

c) Varying the brightness of a lamp

d) Controlling the spee

15. One of the following is an input device.

a) Motor

b) Light

c) Valve

d) Sensor

16. PLC stands for programmable logo controller.

a) True

b) False

c) None of the above

17. In a PLC "I:0/0" is used to denote output and "O:0/0" is used for input

a) True

b) False

c) None of the above

18. Lights, lamps, motors are connected to:

- a) Analog output      b) Digital output      c) Analog input      d) Digital input

19. What is mean by SCADA?

SCAD Means. Supervisory Control And Data Acquisition system

20. Which software used in scada?

X Turbo C

#### PART-B (5 X 2= 10 MARKS)

(Answer all Questions)

1. Draw the Ladder Diagram for EX-OR Gate?
2. Draw the Ladder Diagram for AND Gate?
3. Draw the Ladder Diagram For DOL Starter?
4. List the Name of Programming Software, Communication Software and Simulation Software for Allen Bradley PLC?
5. Difference between Electrical and Electronics?

#### PART-C (2 X 10=20MARKS)

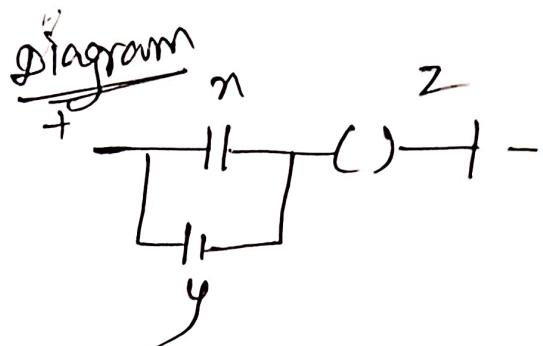
(Answer all Questions)

1. What is meaning by Automation and Its Types and Its Application?
2. a) If a Switch is Pressed , Light A and Light B ON.  
If the Switch is Released, Light A off, Light B ON.  
b) If a switch is ON, after 5 sec. lamp A- On,  
After 10 sec. Lamp B- On, After 15 sec. Lamp C-On.

Answer all question (2 marks)

①. OR Gate

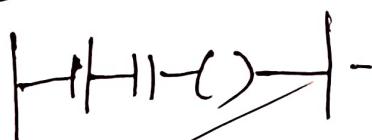
X	Y	Z
0	1	1
1	0	1
0	0	0
1	1	1



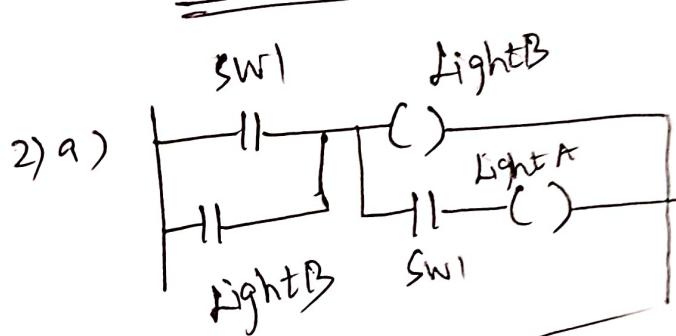
②. AND Gate

Diagram

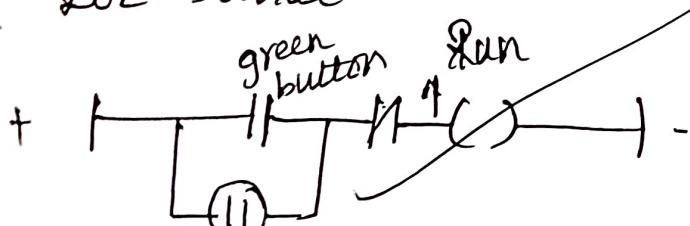
X	Y	Z
1	0	0
0	1	0
0	0	0
1	1	1



Part - C



③. DOL Starter



holding coil

④. Electrical

It is connection of a conductor

Electronics:

It is a connection of semiconductor

SHREE TECHNOLOGIES A FRANCHISEES OF  
PROLIFIC SYSTEMS AND TECHNOLOGIES P LTD,  
SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY  
DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING  
5 DAYS PLC & SCADA TRAINING PROGRAM

Time: 1 Hours

maximum: 50 marks

Date:

PART-A (20 X 1 = 20 MARKS)

36  
50

1. Which Programming Language is commonly used in PLC?

- a) C++      b) Ladder      c) C      d) Java

2. Which One of the Following Communication Cable is used in PLC?

- a) DH-485      b) RS-485      c) RS-232      d) RJ45

3. "Download" describes Transfer from .....

- a) PC to PLC      b) PLC to PC      c) PC to PC      d) PLC to PLC

4. "Upload" describes Transfer from .....

- a) PC to PLC      b) PLC to PC      c) PC to PC      d) PLC to PLC

5. Which one of the following is not associated with AB PLCTimer?

- a) Preset      b) Accumulator      c) Binary Memory      d) Time Base

X

6. Which Coil Permits the Supply when it is in ON state.

- a) Normally OPEN      b) Normally CLOSE

7. Which one of the following belongs to Input address in AB PLC?

- a) I0.0      b) I: 0/0      c) X0      d) I1

8. Which one of the following belongs to Output address in Delta PLC?

- a) O:0/0      b) Y:0.0       c) Y0      d) I:Q

9. Which one of the following belongs to Timer address in AB PLC?  
 a) T0      b) T4:0      c) R0      d) D0

10. Which Coil Doesn't Permits the Supply when it is in ON state.

- a) Normally OPEN       b) Normally CLOSE

11. Which of the following Bit Activates When the Time delay reach Preset Value?

- a) Done Bit       b) Timer Timing Bit      c) Enable Bit

12. Accumulator is Used to ..... in Timer.

- a) Display the Changing values      b) Set the Time Value  
 c) Choosing the time base      d) Address Assigning

13. Which One of the Following is Used to "Set the Time Value" in timer?

- a) Preset       b) Accumulator      c) Time Base      d) Address

14. An example of discrete (digital) control is:

- a) Varying the volume of a music system      b) Turning a lamp ON or OFF  
c) Varying the brightness of a lamp      d) Controlling the speed of fan

15. One of the following is an input device.

- a) Motor      b) Light      c) Valve       d) Sensor

16. PLC stands for programmable logic controller.

- a) True       b) False      c) None of the above

17. In a PLC "I:0/0" is used to denote output and "O:0/0" is used for input.

- a) True       b) False      c) None of the above

18. Lights, lamps, motors are connected to:

- a) Analog output b) Digital output c) Analog input d) Digital input

19. What is mean by SCADA?

Supervision Controller and Data Acquisition.

20. Which software used in scada?

Intouch wonderware

### PART-B (5 X 2= 10 MARKS)

(Answer all Questions)

1. Draw the Ladder Diagram for EX-OR Gate?
2. Draw the Ladder Diagram for AND Gate?
3. Draw the Ladder Diagram For DOL Starter?
4. List the Name of Programming Software, Communication Software and Simulation Software for Allen Bradley PLC?
5. Difference between Electrical and Electronics?

### PART-C (2 X 10=20MARKS)

(Answer all Questions)

1. What is meaningby Automation and Its Types and Its Application?
2. a) If a Switch is Pressed , Light A and Light B ON.  
If the Switch is Released, Light A off, Light B ON.  
b)If a switch is ON, after 5 sec. lamp A- On,  
After 10 sec. Lamp B- On, After 15 sec. Lamp C-On,

**PROLIFIC**  
An ISO 9001:2008 Certified Co.

Name : P. SHAGIL  
Mobile No : 7404462787  
Mail ID : shagilpetiyayya@gmail.com  
Permanent Address: Manavakunnu, Poonkunnam, Kozhikode  
Date of Birth : 10/05/96

Graduation :  Job  Higher Studies

Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma In Industrial Automation at Prolific -( 100% Placement)  
 Post Graduate Diploma In Embedded Systems at Prolific -( 100% Placement)  
 Short term Training Program at Prolific

check: Teaching is good

**PROLIFIC**  
An ISO 9001:2008 Certified Co.

Name : P. S. DAYAVANAN  
Mobile No : 9853491198  
Mail ID : sdayavananuk724@gmail.com  
Permanent Address: 1/726 Anna Nagar, Netham Dindigul District - 624401

Graduation :  Job  Higher Studies

Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma In Industrial Automation at Prolific -( 100% Placement)  
 Post Graduate Diploma In Embedded Systems at Prolific -( 100% Placement)  
 Short term Training Program at Prolific

check: very useful

**PROLIFIC**  
An ISO 9001:2008 Certified Co.

Name : R. RISHABHAN  
Mobile No : 8894495729  
Mail ID : rishabhansoc@gmail.com  
Permanent Address: Mounspuram ICL Street, Palani road, Dindigul

Graduation :  Job  Higher Studies

Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma In Industrial Automation at Prolific -( 100% Placement)  
 Post Graduate Diploma In Embedded Systems at Prolific -( 100% Placement)  
 Short term Training Program at Prolific

check: Within 6 day not enough.  
we need one month for class.. to teach very fast

**PROLIFIC**  
An ISO 9001:2008 Certified Co.

Name : KSK Varshini  
Mobile No : 8154750318  
Mail ID : kskvarshini92001@gmail.com  
Permanent Address: Market Pigeon Road, Oddanchathiram, Dindigul, 624401

Graduation :  Job  Higher Studies

Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma In Industrial Automation at Prolific -( 100% Placement)  
 Post Graduate Diploma In Embedded Systems at Prolific -( 100% Placement)  
 Short term Training Program at Prolific

check: It was very useful to my career. In future must gives another hand to my life.

**PROLIFIC**  
An ISO 9001:2008 Certified Co.

Name : P. Muthukumar  
College Name : SSM Institute of Engineering and Technology  
Department : EEE Mobile No : 9566284525  
Year : III Mail ID : muthukumardesh23mjk@gmail.com  
Permanent Address:

After Graduation :  Job  Higher Studies

Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma In Industrial Automation at Prolific -( 100% Placement)  
 Post Graduate Diploma In Embedded Systems at Prolific -( 100% Placement)  
 Short term Training Program at Prolific

Feedback: This course has easily handled by the teaching staff so it is easy to understand.

**PROLIFIC**  
An ISO 9001:2008 Certified Co.

Name : VINOOTH KUMAR S  
College Name : SSM IET  
Department : EEE Mobile No : 9385795236  
Year : III Mail ID : vkkvinodhkuhan3202@gmail.com  
Permanent Address: 15-12-43 kuttuvvel Nagar, chinnelpatti, dindigul,

After Graduation :  Job  Higher Studies

Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma In Industrial Automation at Prolific -( 100% Placement)  
 Post Graduate Diploma In Embedded Systems at Prolific -( 100% Placement)  
 Short term Training Program at Prolific

Feedback: Good Experience for increasing my skills.

**PROLIFIC**  
An ISO 9001:2008 Certified Co.

Name : J. Vignesh  
College Name : SSB SSMIEL  
Department : EEE Mobile No : 9150209150  
Year : 20/04/2023 Mail ID :  
Permanent Address: 14-1-64A Saliga Vellalan Street.. m.Vadipatti, Dindigul

After Graduation :  Job  Higher Studies

Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma In Industrial Automation at Prolific -( 100% Placement)  
 Post Graduate Diploma In Embedded Systems at Prolific -( 100% Placement)  
 Short term Training Program at Prolific

Feedback: Very useful, good training.

**PROLIFIC**  
An ISO 9001:2008 Certified Co.

Name : J. Suvarna Selvam  
College Name : SSM IET  
Department : EEE Mobile No : 9335662396  
Year : III Mail ID : jmsuvarna.selvam9@gmail.com  
Permanent Address: 8/107 Meenambalam Nagar Bahalurvudhu Post, Dindigul, 624 005

After Graduation :  Job  Higher Studies

Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma In Industrial Automation at Prolific -( 100% Placement)  
 Post Graduate Diploma In Embedded Systems at Prolific -( 100% Placement)  
 Short term Training Program at Prolific

Feedback: This course is very useful and very knowledgeable in my study career.

**PROLIFIC**  
An ISO 9001:2000 Certified Co.

Name: S. Sankararaman  
College Name: SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY  
Year: III  
Department: EEE  
Permanent Address: 17, Krishna Grounds Pudur, Muniruddiholkar (po)  
Vellore - 632 710  
Graduation:  Job  Higher Studies  
Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma in Industrial Automation at Prolific - (100% Placement)  
 Post Graduate Diploma in Embedded Systems at Prolific - (100% Placement)  
 Short term Training Program at Prolific  
Check: *very useful session. we know Automation instance.*

**PROLIFIC**  
An ISO 9001:2000 Certified Co.

Name: J. J. SHRIAR  
College Name: SSM JET  
Year: III  
Department: EEE  
Mobile No: 9861629121  
Permanent Address: 24/2A C.R.L. Lakshmanan road 2nd Street, Vindical.  
After Graduation:  Job  Higher Studies  
Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma in Industrial Automation at Prolific - (100% Placement)  
 Post Graduate Diploma in Embedded Systems at Prolific - (100% Placement)  
 Short term Training Program at Prolific  
Feedback: *very usefull session. I clearly know the PLC software.*

**PROLIFIC**  
An ISO 9001:2000 Certified Co.

Name: ABINAYA S.S.  
College Name: SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY  
Year: III  
Department: EEE  
Permanent Address: 10/1, 8th Cross street, Kanchipuram regan  
Sivakasi, Madrasaduthurai - 649111  
Graduation:  Job  Higher Studies  
Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma in Industrial Automation at Prolific - (100% Placement)  
 Post Graduate Diploma in Embedded Systems at Prolific - (100% Placement)  
 Short term Training Program at Prolific  
Check: *useful*

**PROLIFIC**  
An ISO 9001:2000 Certified Co.

Name: M. MOONAJOTHI  
College Name: SSM JET  
Year: IV  
Department: EEE  
Mobile No: 9003562864  
Permanent Address: 4 Mahavirnagar - 4th mainth pallai street  
Dindigul - 624001  
After Graduation:  Job  Higher Studies  
Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma in Industrial Automation at Prolific - (100% Placement)  
 Post Graduate Diploma in Embedded Systems at Prolific - (100% Placement)  
 Short term Training Program at Prolific  
Feedback: *This Training program is very useful.*

**PROLIFIC**  
An ISO 9001:2000 Certified Co.

Name: M. BRUMMATHAMOTHARAN  
College Name: SSM JET  
Year: III  
Department: EEE  
Permanent Address: T. Paraiyattu, Paraiyattu CPS, Kanniyadi  
Eindigal - 624105  
Graduation:  Job  Higher Studies  
Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma in Industrial Automation at Prolific - (100% Placement)  
 Post Graduate Diploma in Embedded Systems at Prolific - (100% Placement)  
 Short term Training Program at Prolific  
Check: *The training is very useful, and I got lot of knowledge in this training.*

**PROLIFIC**  
An ISO 9001:2000 Certified Co.

Name: ROBIN NICHOLAS S  
College Name: SSM JET  
Year: 3rd  
Department: EEE  
Mobile No: 96717474342  
Permanent Address: 66/3, PAVANAI SAVADI ROAD,  
METTUPATTY, 650148, DINDIGUL, 624002.  
After Graduation:  Job  Higher Studies  
Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma in Industrial Automation at Prolific - (100% Placement)  
 Post Graduate Diploma in Embedded Systems at Prolific - (100% Placement)  
 Short term Training Program at Prolific  
Feedback: *Good Teaching, Good and clear Explain, very useful.*

**PROLIFIC**  
An ISO 9001:2000 Certified Co.

Name: S. Nazir Hussain  
College Name: SSM Institute of Engineering and Technology  
Year: III  
Department: EEE  
Permanent Address: 11-14/2/3, Annayagur, Nallam - 644001  
Eindigal (db)  
Graduation:  Job  Higher Studies  
Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma in Industrial Automation at Prolific - (100% Placement)  
 Post Graduate Diploma in Embedded Systems at Prolific - (100% Placement)  
 Short term Training Program at Prolific  
Check: *It was very useful was my converter and then gathering more ideas and skills.*

**PROLIFIC**  
An ISO 9001:2000 Certified Co.

Name: V. CHILIP. LAKSHMAN  
College Name: SSM JET  
Year: III  
Department: EEE  
Mobile No: 9597498007  
Permanent Address: 15-1-63/8, Sivasangam Street, mettupatti,  
Chinnalappu - pindigal - 684301  
After Graduation:  Job  Higher Studies  
Training Interested In -  
 Short term Training Program in College premises  
 Post Graduate Diploma in Industrial Automation at Prolific - (100% Placement)  
 Post Graduate Diploma in Embedded Systems at Prolific - (100% Placement)  
 Short term Training Program at Prolific  
Feedback: *This Training is Very Useful*

# CERTIFICATE

ASIA'S LARGEST INDUSTRIAL TRAINING COMPANY

In recognition of the commitment to achieve Professional Excellence, it is certified that

## RISHIKARAN R

Has successfully completed Technological Teaching on "Industrial Automation" covering,



Conducted for 5 days during the period 09.05.22 to 13.05.22 at

**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.**

## PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.

- An Affiliate of Aref Group (Kuwait)
- Funded by Can Bank, VC Fund, owned by Canara Bank

Visit us at : [www.prolifictraining.com](http://www.prolifictraining.com)  
National Skill Development Corp. (Govt. of India) Approved Training Company



IAO - USA  
Accredited Courses

An ISO 9001-2008  
Certified Company



*Arvind Balwani*  
Director

# CERTIFICATE

**PROLIFIC**

ASIA'S LARGEST INDUSTRIAL  
TRAINING COMPANY



In recognition of the commitment to achieve Professional Excellence, it is certified that

## K.RAJESH MANI

Has successfully completed Technological Teaching on "Industrial Automation" covering,

- PLC
- SCADA
- VFD

Conducted for 5 days during the period 09.05.22 to 13.05.22 at

**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.**

## PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.

An Affiliate of Aref Group (Kuwait)

Funded by Can Bank, VC Fund, owned by Canara Bank

Visit us at : [www.prolifictraining.com](http://www.prolifictraining.com)

National Skill Development Corp. (Govt. of India) Approved Training Company



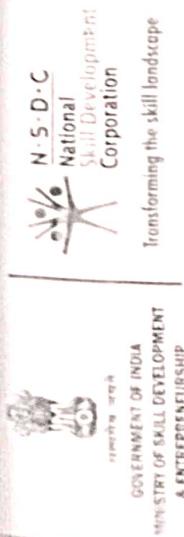
IAO - USA

Accredited Courses

An ISO 9001-2008  
Certified Company

Director

# CERTIFICATE



# PROLIFIC

ASIA'S LARGEST TRAINING  
& TRANSFER OF KNOWLEDGE

In recognition of the commitment to achieve Professional Excellence, it is certified that

PUNITHA VIJAYASRI.P

Has successfully completed Technological Teaching on "Industrial Automation" covering,

- PLC
- SCADA
- VFD

Conducted for 5 days during the period 09.05.22 to 13.05.22 at

**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.**

**PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.**

An Affiliate of Aref Group (Kuwait)

Funded by Can Bank, VC Fund, owned by Canara Bank

Visit us at : [www.prolifictraining.com](http://www.prolifictraining.com)

National Skill Development Corp. (Govt. of India) Approved Training Company



IAO - USA  
Accredited Courses

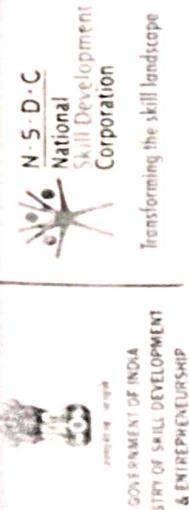
An ISO 9001-2008  
Certified Company

*Gopal Deekshith*  
Director

# CERTIFICATE

**PROLIFIC**

ASIA'S LARGEST INDUSTRIAL  
TRAINING COMPANY



In recognition of the commitment to achieve Professional Excellence, it is certified that

PREETHIKA J

Has successfully completed Technological Teaching on "Industrial Automation" covering,

- PLC
- SCADA
- VFD

Conducted for 5 days during the period 09.05.22 to 13.05.22 at

**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.**

**PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.**

An Affiliate of Aref Group (Kuwait)

Funded by Can Bank, VC Fund, owned by Canara Bank

Visit us at : [www.prolifictraining.com](http://www.prolifictraining.com)

National Skill Development Corp. (Govt. of India) Approved Training Company



IAO - USA  
Accredited Courses

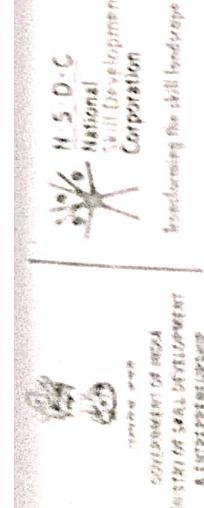
An ISO 9001-2008  
Certified Company

*Chellappa*  
Director

# CERTIFICATE

**PROLIFIC**

ASIA'S LARGEST INDUSTRIAL  
TRAINING COMPANY



In recognition of the commitment to achieve Professional Excellence, it is certified that

BHARATH KUMAR.K

Has successfully completed Technological Teaching on "Industrial Automation" covering,

- ✓ PLC
- ✓ SCADA
- ✓ VFD

Conducted for 5 days during the period 09.05.22 to 13.05.22 at

**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.**

**PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.**

- ✓ An Affiliate of Aret Group (Kuwait)
- ✓ Funded by Can Bank, VC Fund, owned by Canara Bank
- ✓ Visit us at : [www.prolifictraining.com](http://www.prolifictraining.com)
- ✓ National Skill Development Corp. (Govt. of India) Approved Training Company

Chennai

Director



ISO 9001

An ISO 9001:2008  
Certified Company