



SRI BHARATHI

ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)
Kaikkurichi, Pudukkottai -622 303

www.sbec.edu.in

NAAC DOCUMENTS



Quality Indicator Frame Work

Criterion – 1

CURRICULAR ASPECTS

Submitted by

IQAC

Internal Quality Assurance Cell

Sri Bharathi Engineering College for Women



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

KAIKKURUCHI, PUDUKOTTAI – 622 303

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2018-2019 / ODD SEMESTER

1.2 Academic Flexibility (30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

AND

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

VAC Title:	BASIC INDUSTRIAL AUTOMATION				
Resource Person:	Mr.J.Savari Muthu, Technical Head, Stepup Controls, No:70,TG Anna Nagar, Ayapakkam, Main Road, Ambattur,Chennai-53 salesstepupcontrols@gmail.com				
Date of conduct from :	18.06.2018	To:	22.06.2018	Duration:	30 Hours
Organized Department :	ELECTRICAL AND ELECTRONICS ENGINEERING				
Participant Year:	2,3,4	Semester:	ODD	No. of Students Registered :	36
Venue:	Tutorial Hall-42,SBECW				

TABLE OF CONTENTS

SNO	DOCUMENT	PAGE-NO
1	VAC Circular	3-3
2	VAC Syllabus and Schedule	4-4
3	List Of Students Participants	5-6
4	Attendance Of Students	7-9
5	VAC Report	10-10
6	Course Completion Certificates -VAC	11-13
7	VAC Test Paper	13-15
8	VAC Answer Key	16-16
9	VAC Test Answer Sheet-Sample	17-26
10	VAC Mark Statement	27-28



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

KAIKKURUCHI, PUDUKOTTAI – 622 303

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2018-2019 / ODD SEMESTER

DEPARTMENT CIRCULAR

Date: 11/06/2018

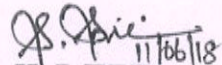
Value Added Course offered by the Department of EEE will be conducted in association with M/s STEPUP CONTROLS, CHENNAI for II, III, IV year students on “BASIC INDUSTRIAL AUTOMATION” from 18.06.2018 to 22.06.2018. Certificates will be issued to all the eligible participants at the end of the Course. The Resource person details are given in the table.

RESOURCE PERSON DETAILS:


Name:	Mr.J.Savari Muthu
Designation:	Technical Head
Company name with Address:	Stepup Controls No:70,TG Anna Nagar, Ayapakkam,Main Road, Ambattur,Chennai-53
Mail id:	GST:33AWYPG8803FIZA salesstepupcontrols@gmail.com

Cc:

- Principal's Office
- IQAC Coordinator
- Class In charges - II, III & IV-year of EEE
- II, III & IV-year EEE Students
- Notice Board


HOD/EEE

HOD EEE
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURUCHI,
PUDUKKOTTAI - 622 303.


Dr S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkuruchi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
KAIKKURUCHI, PUDUKOTTAI – 622 303
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2018-2019/ ODD SEMESTER

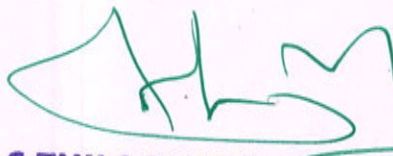
VALUE ADDED COURSE


BASIC INDUSTRIAL AUTOMATION

SCHEDULE

S.NO	TOPICS	DURATION	DATE
1.	Need and benefits of industrial Automation, Automation Hierarchy.	2	18.06.2018
2.	Basic components of automation and its types	2	18.06.2018
3.	HMI: Introduction, Goal directed design, GUI	2	18.06.2018
4.	HMI: Introduction, Goal directed design	2	19.06.2018
5.	GUI, Design guidelines	2	19.06.2018
6.	Interaction styles, communication.	2	19.06.2018
7.	Building blocks of PLC, Fixed and modular PLC, I/O module	3	20.06.2018
8.	Programming instructions, programming language, ladder logic and PLC applications.	3	20.06.2018
9.	Electric drives: types, functions, characteristics, four quadrant operation	3	21.06.2018
10.	AC and DC drive controls, Drives working principle, specifications and its applications.	3	21.06.2018
11.	Architecture, benefits and various editors of SCADA	3	22.06.2018
12.	Interfacing SCADA with PLC, steps for creating SCADA and its applications.	3	22.06.2018
TOTAL HOURS		30HOUR	


VAC COORDINATOR


Dr. **S. THILAGAVATHI** M.E., Ph.D
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkuruchi - 622 303, Pudukkottai Dt.


HoD/EEE
HOD EEE

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURUCHI,
PUDUKKOTTAI - 622 303.




SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
KAIKKURUCHI, PUDUKKOTTAI-622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2018-2019 / ODD SEMESTER


STUDENT NAME LIST FOR VALUE ADDED COURSE

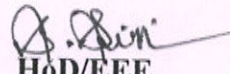
BASIC INDUSTRIAL AUTOMATION

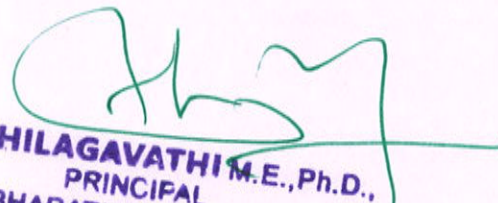
S.NO	NAME	REG.NO	YEAR & SEMESTER
1	NAZEERA BANU.I	912617105001	II & III
2	PARTHIKA.S	912617105002	II & III
3	PRIYA.T	912617105003	II & III
4	SAJINA.K	912617105004	II & III
5	SELSIYA.R	912617105005	II & III
6	THENMOZHI.J	912617105006	II & III
7	VANITHA.E	912617105007	II & III
8	PRASANNA P	912617105301	II & III
9	SIYAMALADEVI S	912617105302	II & III
10	ABIRAM.I.M	912616105001	III & V
11	AJITHA.R	912616105002	III & V
12	GIRIJA.V	912616105003	III & V
13	JOTHIKA.A	912616105006	III & V
14	KARUNAMBIGAI.A	912616105007	III & V
15	PRASANNA.K	912616105008	III & V
16	SARANYA.G	912616105009	III & V
17/	SNEHA.V	912616105010	III & V
18	SUBHASRI.T	912616105011	III & V
19	SURIYAKALA.R	912616105013	III & V
20	MAHESWARI R	912616105301	III & V
21	PRINCY ROSELIN I	912616105302	III & V
22	ASWINI .B	912615105001	IV & VII
23	DHANALAKSHMI .A	912615105003	IV & VII


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkuruchi - 622 303, Pudukkotta: Dt.

24	DIVYADHARSHINI .B	912615105004	IV & VII
25	MANJULA .S	912615105005	IV & VII
26	PRAVEENA .K	912615105006	IV & VII
27	PRAVEENA .R	912615105007	IV & VII
28	PRIYADHARSINI .R	912615105008	IV & VII
29	SANGEETHA .M	912615105009	IV & VII
30	SANTHIYA RANI .C	912615105011	IV & VII
31	SUGANYA .A	912615105012	IV & VII
32	SUWATHI .D	912615105013	IV & VII
33	SWARNALATHA .R	912615105014	IV & VII
34	VAISHNAVI .B	912615105015	IV & VII
35	AISHWARYA .S	912615105301	IV & VII
36	MALINI.K	912615105302	IV & VII


VAC COORDINATOR


HOD/EEE
HOD EEE
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 622 303.


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

KAIKKURICHI, PUDUKKOTTAI-622 303

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2018-2019 / ODD SEMESTER

ATTENDANCE SHEET FOR VALUE ADDED COURSE

BASIC INDUSTRIAL AUTOMATION

S.NO	REG. NO	NAME	YEAR/ SEM	18.06.18		19.06.18		20.06.18		21.06.18		22.06.18		NO. OF CLASS ATTENDED	SIGN OF STUDENT
				F.N	A.N	F.N	A.N	F.N	A.N	F.N	A.N	F.N	A.N		
1	912617105001	NAZEERA BANU.I	II & III	/	/	/	/	/	/	/	/	/	/	10	J. Ramkumari
2	912617105002	PARTHIKA.S	II & III	/	/	/	/	/	/	/	/	/	/	10	S. Parthika
3	912617105003	PRIYA.T	II & III	/	/	/	/	/	/	/	/	/	/	10	P. Priya
4	912617105004	SAJINA.K	II & III	/	/	/	/	/	/	/	/	/	/	10	K. Sajina
5	912617105005	SELSIYA.R	II & III	/	/	/	/	/	/	/	/	/	/	10	R. Selsiya
6	912617105006	THENMOZHI.J	II & III	/	/	/	/	/	/	/	/	/	/	10	J. Thenzhi
7	912617105007	VANITHA.E	II & III	/	a	/	/	/	/	/	/	/	/	09	E. Vanitha
8	912617105301	PRASANNA P	II & III	/	/	/	/	/	/	/	/	/	/	10	P. Prasnna
9	912617105302	SIYAMALADEVI S	II & III	/	/	/	/	/	/	/	/	/	/	10	S. Siamaladevi
10	912616105001	ABIRAMI.M	III & V	/	/	/	/	/	/	/	/	/	/	10	A. Birami

Dr. S. THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

**SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN**


Kaikkurichi - 622 303, Pudukkottai Dt.

11	912616105002	AJITHA.R	III & V	/	/	/	/	/	/	/	/	/	/	/	10	Rajitha
12	912616105003	GIRIJA.V	III & V	/	/	/	/	/	/	/	/	/	/	/	10	Girija
13	912616105006	JOTHIKA.A	III & V	/	a	/	/	/	/	/	/	/	/	/	09	Jothi
14	912616105007	KARUNAMBIGAI.A	III & V	/	/	/	/	/	/	/	/	/	/	/	10	Karunambigai
15	912616105008	PRASANNA.K	III & V	/	/	/	/	/	/	/	/	/	/	/	10	Prasanna
16	912616105009	SARANYA.G	III & V	/	/	/	/	/	/	/	/	/	/	/	10	Saranya
17	912616105010	SNEHA.V	III & V	/	/	/	/	/	a	/	/	/	/	/	09	Sneha
18	912616105011	SUBHASRIT	III & V	/	/	/	/	/	/	/	/	/	/	/	10	Subashini
19	912616105013	SURIYAKALA.R	III & V	/	/	/	/	/	/	/	/	/	/	/	10	R.Suriyakala
20	912616105301	MAHESWARI R	III & V	/	/	/	/	/	/	/	/	/	/	/	10	Maheswari
21	912616105302	PRINCY ROSELINI	III & V	/	/	/	/	/	/	/	/	/	/	/	10	Princy
22	912615105001	ASWINI .B	IV & VII	/	/	/	/	/	/	/	/	/	/	/	10	Aswini.B
23	912615105003	DHANALAKSHMI .A	IV & VII	/	/	/	/	/	/	/	/	/	/	/	10	Dhanalakshmi.A
24	912615105004	DIVYADHARSHINI .B	IV & VII	/	/	/	/	/	/	/	/	/	/	/	10	Divyadharsini.B
25	912615105005	MANJULA .S	IV & VII	/	/	/	/	/	/	/	/	/	/	/	10	Manjula.S
26	912615105006	PRAVEENA .K	IV & VII	/	/	/	/	/	/	/	/	/	/	/	10	Praveena.K
27	912615105007	PRAVEENA .R	IV & VII	/	/	/	/	/	/	/	/	/	a	09	Praveena.R	
28	912615105008	PRIYADHARSINI .R	IV & VII	/	/	/	/	/	/	/	/	/	/	/	10	Priyadharsini.R
29	912615105009	SANGEETHA .M	IV & VII	/	/	/	/	/	/	/	/	/	/	/	10	Sangeetha.M


Dr. S.THILAGAVATHI M.E., Ph.D.,
 PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
 Kaikkurchi - 622 303, Pudukkottai Dt.

30	912615105011	SANTHIYA RANI .C	IV & VII	/	/	/	/	/	/	/	/	/	/	10	Santhiya Rani C
31	912615105012	SUGANYA .A	IV & VII	/	a	/	/	/	/	/	/	/	/	09	Suganya A
32	912615105013	SUWATHI .D	IV & VII	/	/	/	/	/	/	/	/	/	/	10	Suwathi D
33	912615105014	SWARNALATHA .R	IV & VII	/	/	/	/	/	/	/	/	/	/	10	Swarnalatha R
34	912615105015	VAISHNAVI .B	IV & VII	/	/	/	/	/	/	/	/	/	/	10	Vaishnavi B
35	912615105301	AISHWARYA .S	IV & VII	/	/	/	/	a	a	/	/	/	/	08	Aishwarya S
36	912615105302	MALINI.K	IV & VII	/	/	/	/	/	/	/	/	/	/	10	Malini K


VAC COORDINATOR


HoD/EEE

HOD EEE
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 622 303.


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Report on Value Added Course

Title:	BASIC INDUSTRIAL AUTOMATION				
Resource Person:	Mr.J.Savari Muthu, Technical Head, Stepup Controls, No:70,TG Anna Nagar, Ayapakkam, Main Road, Ambattur,Chennai-53 salesstepupcontrols@gmail.com				
Date of conduct from :	18.06.2018	To:	22.06.2018	Duration:	30 Hours
Organized Department :	ELECTRICAL AND ELECTRONICS ENGINEERING				
Participant Year:	2/ 3 /4	Semester:	ODD	No. of Students Registered :	36
Venue:	Tutorial Hall-42,SBECW				

Outcome of Value Added Course (VAC)

At the end of the Course, Students can able to

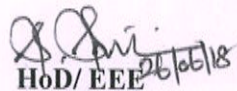
- Explain about the need and benefits of industrial Automation, Automation Hierarchy and its types.
- Describe about the HMI: Introduction, Goal directed design, GUI.
- Obtain insight about the building blocks of PLC, Fixed and modular PLC, Programming instructions, ladder logic and PLC applications.
- Comprehend about Electric drives: types, functions, characteristics, four quadrant operation.
- Demonstrate about AC and DC drive controls, Drives working principle, specifications and its applications.
- Illustrated about Architecture, benefits of SCADA, Interfacing SCADA with PLC, and its applications.

No. of students successfully completed the VAC course is 36 students based on the following assessment process.

Assessment Process

- Students, who are securing **more than 60% on total score** and secured more than 60% in attendance is eligible to receive the certificate for the VAC course conducted.
- Total Score = (0.5 *Attendance in VAC out of 100 percentage + 0.5 *Test mark in VAC out of 100 marks)


VAC Coordinator

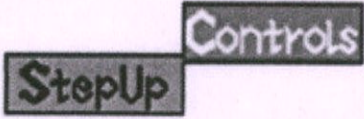

HOD/ EEE
HOD E.E.


Principal

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 822 303.

PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT


Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



STEPUP CONTROLS

No:70, TG Anna Nagar, Ayapakkam, Main Road, Ambattur, Chennai-53,
GST:33AWYPG8803FIZA Mail id: salesstepupcontrols@gmail.com

CERTIFICATE OF PARTICIPATION

This is to certify that Mr/Ms **PRIYA.T**, Reg No **912617105003**, **II** year,
Electrical and Electronics Engineering student of Sri Bharathi Engineering
College for Women, Pudukkottai for his/her active participation during the
conduct of the 5 Days Value added Course on "**BASIC INDUSTRIAL
AUTOMATION**" held on 18 - 22 June 2018.

We wish her all success.

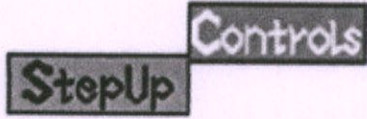
For STEPUP CONTROLS,

AUTHORIZED SIGNATORY

TECHNICAL HEAD



BY **S.THILAGAVATHI M.E., Ph.D.,**
PRINCIPAL
**SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN**
Kaikkurchi - 622 303, Pudukkottai Dt.



STEPUP CONTROLS

No:70, TG Anna Nagar, Ayapakkam, Main Road, Ambattur, Chennai-53,
GST:33AWYPG8803FIZA Mail id: salesstepupcontrols@gmail.com

CERTIFICATE OF PARTICIPATION

This is to certify that Mr/Ms AJITHA.R, Reg No 912616105002, III year,
Electrical and Electronics Engineering student of Sri Bharathi Engineering
College for Women, Pudukkottai for his/her active participation during the
conduct of the 5 Days Value added Course on "BASIC INDUSTRIAL
AUTOMATION" held on 18 - 22 June 2018.

We wish her all success.

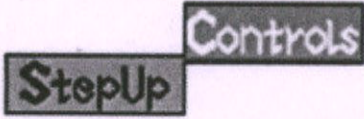
For STEPUP CONTROLS,

AUTHORIZED SIGNATORY

TECHNICAL HEAD



Dr. **S.THILAGAVATHI** M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.



STEPUP CONTROLS

No:70, TG Anna Nagar, Ayapakkam, Main Road, Ambattur, Chennai-53,
GST:33AWYPG8803FIZA Mail id: salesstepupcontrols@gmail.com

CERTIFICATE OF PARTICIPATION

This is to certify that Mr/Ms ASWINI.B, Reg No 912615105001, IV year,
Electrical and Electronics Engineering student of Sri Bharathi Engineering
College for Women, Pudukkottai for his/her active participation during the
conduct of the 5 Days Value added Course on "BASIC INDUSTRIAL
AUTOMATION" held on 18 - 22 June 2018.

We wish her all success.

For STEPUP CONTROLS,

AUTHORIZED SIGNATORY

TECHNICAL HEAD



Dr **S.THILAGAVATHI** M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2018-2019 / ODD SEMESTER

VALUE ADDED COURSE

BASICS INDUSTRIAL AUTOMATION

Name of student:

Year/Sem:

AU Reg.No:

MULTIPLE CHOICE QUESTIONS (20 X1 =20 MARKS)

- Automation system is also called as _____.
a) Process automation
b) Automatic technique
c) Manual process
d) Manufacturing process
- Which of the following statement is true regarding the automation process?
a) It is a process that automatically controls process like pulp factories
b) It is a process that controls process like pulp factories using robots
c) It is a process that controls process like pulp factories using humans
d) None of the above
- Which of the following are the components of process automation?
a) Sensors
b) Controllers
c) Actuators
d) All the above
- A automation system is related to _____.
a) Distributed control system
b) Supervisory control and data acquisition system
c) Distinct control system
d) Both a and b
- GUI stands for _____.
a) Graphical User Interface
b) Graphical User ID
c) Geo User Interface
d) All the above
- Which among the below options is not as interdisciplinary field of HCI?
a) Cognitive Psychology
b) Ergonomics
c) Design
d) Civil


Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

7. What does HMI stands for?
 - a) Human Machine Interface
 - b) Human Machine Interaction
 - c) Human Machine Industry
 - d) Human Machine Implementation

8. What is the primary interactive method of communication used by humans?
 - a) Reading
 - b) Writing
 - c) Speaking
 - d) None of the above

9. The programmable logic controllers are used in _____
 - a) Glass and paper industry
 - b) Process Automation Plants
 - c) Cement manufacturing
 - d) All the above

10. In modular type PLC, the PLC's are classified into _____
 - a) Relay output PLC
 - b) Transistor output PLC
 - c) Triac output PLC
 - d) All the above

11. The advantages of PLC are _____
 - a) Easy maintenance
 - b) Reliability is high
 - c) Small in size
 - d) All the above

12. The visual programming language also called as _____
 - a) Relay logic
 - b) Ladder logic
 - c) Controller logic
 - d) All the above

13. Type-A chopper is used for obtaining which type of mode?
 - a) Reverse motoring mode.
 - b) Motoring mode
 - c) Reverse regenerative braking mode
 - d) Regenerative braking mode

14. Which of the following devices should be used as a switch for high power and high voltage application?
 - a) TRIAC
 - b) Thyristor
 - c) GTO
 - d) MOSFET

15. Which of the following motor can be referred as a universal motor?
 - a) Permanent magnet motor
 - b) DC shunt motor
 - c) DC series motor
 - d) DC compound motor


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai- 622 303.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

16. What is an electric drive?
- a) A machine that converts electrical energy into kinetic energy
 - b) A machine that converts mechanical energy into electrical energy
 - c) A machine that converts electrical energy into mechanical energy
 - d) A machine that converts kinetic energy into electrical energy
17. GUI in SCADA is used for _____ process of managing supervisory.
- a) High level
 - b) Low level
 - c) Equal
 - d) None of the above
18. The functions of the SCADA systems performed by using _____
- a) Sensors, communication network
 - b) SCADA master units
 - c) Remote telemetry units
 - d) All of the above
19. Which of the following are the issues in SCADA?
- a) Vulnerable to network attacks
 - b) Software updates
 - c) Occupies more space
 - d) All the above
20. Which of the following are the elements in SCADA?
- a) Supervisory computer
 - b) Remote terminal units
 - c) Programmable logic controllers
 - d) All the above

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai- 622 303.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2018-2019 / ODD SEMESTER

VALUE ADDED COURSE

BASIC INDUSTRIAL AUTOMATION.

ANSWER KEY FOR MCQ

1	a	2	a	3	d	4	d	5	a
6	d	7	a	8	c	9	d	10	d
11	d	12	b	13	b	14	b	15	c
16	c	17	a	18	d	19	a	20	d

Dr. S. THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

**SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN**

Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2018-2019 / ODD SEMESTER

VALUE ADDED COURSE

BASICS INDUSTRIAL AUTOMATION

Name of student: K. Sajina
Year/Sem: II / III

16
20

AU Reg.No: 912617105004

MULTIPLE CHOICE QUESTIONS (20 X1 =20 MARKS)

- Automation system is also called as _____.
a) Process automation
c) Manual process
b) Automatic technique
d) Manufacturing process
- Which of the following statement is true regarding the automation process?
a) It is a process that automatically controls process like pulp factories
b) It is a process that controls process like pulp factories using robots
c) It is a process that controls process like pulp factories using humans
d) None of the above
- Which of the following are the components of process automation?
a) Sensors
c) Actuators
b) Controllers
d) All the above
- A automation system is related to _____.
a) Distributed control system
c) Distinct control system
b) Supervisory control and data acquisition system
d) Both a and b
- GUI stands for _____.
a) Graphical User Interface
c) Geo User Interface
b) Graphical User ID
d) All the above
- Which among the below options is not as interdisciplinary field of HCI?
a) Cognitive Psychology
c) Design
b) Ergonomics
d) Civil


Dr. **S. THILAGAVATHI M.E., Ph.D.,**
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

7. What does HMI stands for?
a) Human Machine Interface
c) Human Machine Industry
b) Human Machine Interaction
d) Human Machine Implementation
8. What is the primary interactive method of communication used by humans?
a) Reading
c) Speaking
b) Writing
d) None of the above
9. The programmable logic controllers are used in _____
a) Glass and paper industry
c) Cement manufacturing
b) Process Automation Plants
d) All the above
10. In modular type PLC, the PLC's are classified into _____
a) Relay output PLC
c) Triac output PLC
b) Transistor output PLC
d) All the above
11. The advantages of PLC are _____
a) Easy maintenance
c) Small in size
b) Reliability is high
d) All the above
12. The visual programming language also called as _____
a) Relay logic
c) Controller logic
b) Ladder logic
d) All the above
13. Type-A chopper is used for obtaining which type of mode?
a) Reverse motoring mode.
c) Reverse regenerative braking mode
b) Motoring mode
d) Regenerative braking mode
14. Which of the following devices should be used as a switch for high power and high voltage application?
a) TRIAC
c) GTO
b) Thyristor
d) MOSFET
15. Which of the following motor can be referred as a universal motor?
a) Permanent magnet motor
c) DC series motor
b) DC shunt motor
d) DC compound motor

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

16. What is an electric drive?
- a) A machine that converts electrical energy into kinetic energy
 - b) A machine that converts mechanical energy into electrical energy
 - c) A machine that converts electrical energy into mechanical energy
 - d) A machine that converts kinetic energy into electrical energy
17. GUI in SCADA is used for _____ process of managing supervisory.
- a) High level
 - b) Low level
 - c) Equal
 - d) None of the above
18. The functions of the SCADA systems performed by using _____
- a) Sensors, communication network
 - b) SCADA master units
 - c) Remote telemetry units
 - d) All of the above
19. Which of the following are the issues in SCADA?
- a) Vulnerable to network attacks
 - b) Software updates
 - c) Occupies more space
 - d) All the above
20. Which of the following are the elements in SCADA?
- a) Supervisory computer
 - b) Remote terminal units
 - c) Programmable logic controllers
 - d) All the above

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2018-2019 / ODD SEMESTER

VALUE ADDED COURSE

BASICS INDUSTRIAL AUTOMATION

Name of student: A. JOTHIKA

Year/Sem: II / I

15
20

AU Reg.No: 912616105006

MULTIPLE CHOICE QUESTIONS (20 X1 =20 MARKS)

1. Automation system is also called as _____.
a) Process automation
b) Automatic technique
c) Manual process
d) Manufacturing process

2. Which of the following statement is true regarding the automation process?
a) It is a process that automatically controls process like pulp factories
b) It is a process that controls process like pulp factories using robots
c) It is a process that controls process like pulp factories using humans
d) None of the above

3. Which of the following are the components of process automation?
a) Sensors
b) Controllers
c) Actuators
d) All the above

4. A automation system is related to _____.
a) Distributed control system
b) Supervisory control and data acquisition system
c) Distinct control system
d) Both a and b

5. GUI stands for _____.
a) Graphical User Interface
b) Graphical User ID
c) Geo User Interface
d) All the above

6. Which among the below options is not as interdisciplinary field of HCI?
a) Cognitive Psychology
b) Ergonomics
c) Design
d) Civil


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai- 622 303.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

7. What does HMI stands for?
a) Human Machine Interface
b) Human Machine Interaction
c) Human Machine Industry
d) Human Machine Implementation
8. What is the primary interactive method of communication used by humans?
a) Reading
b) Writing
c) Speaking
d) None of the above
9. The programmable logic controllers are used in _____
a) Glass and paper industry
b) Process Automation Plants
c) Cement manufacturing
d) All the above
10. In modular type PLC, the PLC's are classified into _____
a) Relay output PLC
b) Transistor output PLC
c) Triac output PLC
d) All the above
11. The advantages of PLC are _____
a) Easy maintenance
b) Reliability is high
c) Small in size
d) All the above
12. The visual programming language also called as _____
a) Relay logic
b) Ladder logic
c) Controller logic
d) All the above
13. Type-A chopper is used for obtaining which type of mode?
a) Reverse motoring mode.
b) Motoring mode
c) Reverse regenerative braking mode
d) Regenerative braking mode
14. Which of the following devices should be used as a switch for high power and high voltage application?
a) TRIAC
b) Thyristor
c) GTO
d) MOSFET
15. Which of the following motor can be referred as a universal motor?
a) Permanent magnet motor
b) DC shunt motor
c) DC series motor
d) DC compound motor

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL

**SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.**



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

16. What is an electric drive?
a) A machine that converts electrical energy into kinetic energy
b) A machine that converts mechanical energy into electrical energy
 c) A machine that converts electrical energy into mechanical energy
d) A machine that converts kinetic energy into electrical energy
17. GUI in SCADA is used for _____ process of managing supervisory.
 a) High level
b) Low level
c) Equal
d) None of the above
18. The functions of the SCADA systems performed by using _____
a) Sensors, communication network
b) SCADA master units
c) Remote telemetry units
 d) All of the above
19. Which of the following are the issues in SCADA?
 a) Vulnerable to network attacks
b) Software updates
c) Occupies more space
d) All the above
20. Which of the following are the elements in SCADA?
a) Supervisory computer
b) Remote terminal units
c) Programmable logic controllers
 d) All the above

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2018-2019 / ODD SEMESTER

VALUE ADDED COURSE

BASICS INDUSTRIAL AUTOMATION

Name of student: D. SUWATHI

Year/Sem: IV / VI

15
20

AU Reg.No: 912615105013

MULTIPLE CHOICE QUESTIONS (20 X1 =20 MARKS)

- Automation system is also called as _____.
a) Process automation
b) Automatic technique
c) Manual process
d) Manufacturing process
- Which of the following statement is true regarding the automation process?
a) It is a process that automatically controls process like pulp factories
b) It is a process that controls process like pulp factories using robots
c) It is a process that controls process like pulp factories using humans
d) None of the above
- Which of the following are the components of process automation?
a) Sensors
b) Controllers
c) Actuators
d) All the above
- A automation system is related to _____.
a) Distributed control system
b) Supervisory control and data acquisition system
c) Distinct control system
d) Both a and b
- GUI stands for _____.
a) Graphical User Interface
b) Graphical User ID
c) Geo User Interface
d) All the above
- Which among the below options is not as interdisciplinary field of HCI?
a) Cognitive Psychology
b) Ergonomics
c) Design
d) Civil


Dr. S. THILAGAVATHI M.E., Ph.D.
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

7. What does HMI stands for?
a) Human Machine Interface
c) Human Machine Industry
b) Human Machine Interaction
d) Human Machine Implementation
8. What is the primary interactive method of communication used by humans?
a) Reading
c) Speaking
b) Writing
d) None of the above
9. The programmable logic controllers are used in _____
a) Glass and paper industry
c) Cement manufacturing
b) Process Automation Plants
d) All the above
10. In modular type PLC, the PLC's are classified into _____
a) Relay output PLC
c) Triac output PLC
b) Transistor output PLC
d) All the above
11. The advantages of PLC are _____
a) Easy maintenance
c) Small in size
b) Reliability is high
d) All the above
12. The visual programming language also called as _____
a) Relay logic
c) Controller logic
b) Ladder logic
d) All the above
13. Type-A chopper is used for obtaining which type of mode?
a) Reverse motoring mode.
c) Reverse regenerative braking mode
b) Motoring mode
d) Regenerative braking mode
14. Which of the following devices should be used as a switch for high power and high voltage application?
a) TRIAC
c) GTO
b) Thyristor
d) MOSFET
15. Which of the following motor can be referred as a universal motor?
a) Permanent magnet motor
c) DC series motor
b) DC shunt motor
d) DC compound motor


Dr. S. THILAGAVATHI M.E., Ph.D.
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi, Pudukkottai- 622 303.
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

16. What is an electric drive?
- a) A machine that converts electrical energy into kinetic energy
 - b) A machine that converts mechanical energy into electrical energy
 - c) A machine that converts electrical energy into mechanical energy
 - d) A machine that converts kinetic energy into electrical energy
17. GUI in SCADA is used for _____ process of managing supervisory.
- a) High level
 - b) Low level
 - c) Equal
 - d) None of the above
18. The functions of the SCADA systems performed by using _____
- a) Sensors, communication network
 - b) SCADA master units
 - c) Remote telemetry units
 - d) All of the above
19. Which of the following are the issues in SCADA?
- a) Vulnerable to network attacks
 - b) Software updates
 - c) Occupies more space
 - d) All the above
20. Which of the following are the elements in SCADA?
- a) Supervisory computer
 - b) Remote terminal units
 - c) Programmable logic controllers
 - d) All the above


Dr **S.THILAGAVATHI M.E. Ph.D.,**
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai- 622 303.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2018-2019 / ODD SEMESTER

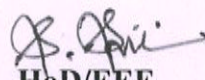
MARK SHEET FOR VALUE ADDED COURSE
BASIC INDUSTRIAL AUTOMATION

S.NO	REG. NO	NAME	YEAR/ SEM	ATTENDACE 50% (A)		VAC -MCQ 50%(B)		OVERALL MARK (A+B)
				No of Session Attended	MARKS	No of Correct Answer	MARKS	
1	912617105001	NAZEERA BANU.I	II & III	10	100	18	90	95
2	912617105002	PARTHIKA.S	II & III	10	100	19	95	98
3	912617105003	PRIYA.T	II & III	10	100	17	85	93
4	912617105004	SAJINA.K	II & III	10	100	16	80	90
5	912617105005	SELSIYA.R	II & III	10	100	15	75	88
6	912617105006	THENMOZHI.J	II & III	10	100	18	90	95
7	912617105007	VANITHA.E	II & III	9	90	19	95	93
8	912617105301	PRASANNA P	II & III	10	100	17	85	93
9	912617105302	SIYAMALADEVI S	II & III	10	100	18	90	95
10	912616105001	ABIRAMI.M	III & V	10	100	17	85	93
11	912616105002	AJITHA.R	III & V	10	100	19	95	98
12	912616105003	GIRIJA.V	III & V	10	100	18	90	95
13	912616105006	JOTHIKA.A	III & V	9	90	15	75	83
14	912616105007	KARUNAMBIGAI.A	III & V	10	100	19	95	98
15	912616105008	PRASANNA.K	III & V	10	100	18	90	95
16	912616105009	SARANYA.G	III & V	10	100	17	85	93
17	912616105010	SNEHA.V	III & V	10	100	20	100	100
18	912616105011	SUBHASRI.T	III & V	9	90	15	75	83
19	912616105013	SURIYAKALA.R	III & V	10	100	19	95	98
20	912616105301	MAHESWARI R	III & V	10	100	18	90	95
21	912616105302	PRINCY ROSELIN I	III & V	10	100	19	95	98
22	912615105001	ASWINI .B	IV & VII	10	100	17	85	93
23	912615105003	DHANALAKSHMI .A	IV & VII	10	100	16	80	90

Dr S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.

24	912615105004	DIVYADHARSHINI .B	IV & VII	10	100	15	75	88
25	912615105005	MANJULA .S	IV & VII	10	100	18	90	95
26	912615105006	PRAVEENA .K	IV & VII	10	100	19	95	98
27	912615105007	PRAVEENA .R	IV & VII	9	90	17	85	88
28	912615105008	PRIYADHARSINI .R	IV & VII	10	100	18	90	95
29	912615105009	SANGEETHA .M	IV & VII	10	100	17	85	93
30	912615105011	SANTHIYA RANI .C	IV & VII	10	100	19	95	98
31	912615105012	SUGANYA .A	IV & VII	9	90	20	100	95
32	912615105013	SUWATHI .D	IV & VII	10	100	15	75	88
33	912615105014	SWARNALATHA .R	IV & VII	10	100	19	95	98
34	912615105015	VAISHNAVI .B	IV & VII	10	100	18	90	95
35	912615105301	AISHWARYA .S	IV & VII	8	80	17	85	83
36	912615105302	MALINI.K	IV & VII	10	100	16	80	90


VAC COORDINATOR


HOD/EEE
HOD EEE
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI,
PUDUKKOTTAI - 622 303.


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.