



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 2019-2020 / 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:	ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS					
Resource Person:	Resource Person 1: K.Kamaraj, Co-Founder, Power Integrated Solutions PVT LTD,			Resource Person 2: R.Anbalagan Senior Engineer		
Date of conduct from :	24.06.2019	To:	28.06.2019	Duration:	30 Hours	
Organized Department :	ELECTRICAL AND ELECTRONICS ENGINEERING					
Participant Year:	2, 3 ,4	Semester:	ODD	No. of Students Registered :	28	
Venue:	Tutorial Hall-42,SBECW					

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019-2020 / ODD SEMESTER

DEPARTMENT CIRCULAR

Date: 14/06/2019

Value Added Course offered by the Department of EEE will be conducted for II, III, IV year students on “**ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS**” from 24.06.2019 to 28.06.2019. Certificates will be issued to all the eligible participants at the end of the Course.

RESOURCE PERSON DETAILS:

Name:	Mr.K.Kamaraj	Mr.R.Anbalagan
Designation:	Co-Founder	Senior Engineer
Company name with Address:	Power Integrated Solutions PVT LTD, #10A/3 Radhakrishna Colony, Sastri Road, Thennur, Trichy-17.	
Mail id:	<u>powerintegratedsolutions@gmail.com</u>	

Cc:

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


14/06/19
HOD/EEE

HOD EEE

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
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PUDUKKOTTAI - 622 303.



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

PRINCIPAL

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KAIKKURUCHI, PUDUKOTTAI – 622 303

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019-2020 / ODD SEMESTER


VALUE ADDED COURSE

ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS

SCHEDULE

S.NO	TOPICS	DURATION	DATE
1.	Electrical Control system and their classifications.	2	24.06.2019
2.	Design of Electrical control circuits.	2	24.06.2019
3.	Real time applications of control system	2	24.06.2019
4.	Design, installation, testing and monitoring of electrical network systems	3	25.06.2019
5.	Model control system theory and its applications, state variable for engineering.	3	25.06.2019
6.	Bandwidth, sensitivity, damping and oscillations	3	26.06.2019
7.	Fully automated system with stability analysis	3	26.06.2019
8.	Filters, sensors, and encoder responses of the system	3	27.06.2019
9.	Robust control system and Intelligent control schemes	3	27.06.2019
10.	Digital processing of signals, Analog and digital conversion	3	28.06.2019
11.	Study of simulation of electrical control techniques with a systematic approach to digital logic design.	3	28.06.2019
TOTAL HOURS		30HOUR	


VAC COORDINATOR


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2019-2020 / ODD SEMESTER


STUDENT NAME LIST FOR VALUE ADDED COURSE

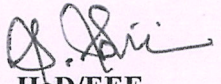
ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS

S.NO	NAME	REG.NO	YEAR & SEMESTER
1	AARTHI G	912618105001	II & III
2	AASHA R	912618105002	II & III
3	AGARI S	912618105003	II & III
4	JEEVITHA R	912618105004	II & III
5	NISHA K	912618105005	II & III
6	RAMANA R	912618105006	II & III
7	SNEHA S	912618105007	II & III
8	VINOTHINI V	912618105301	II & III
9	NAZEERA BANU I	912617105001	III & V
10	PARTHIKA S	912617105002	III & V
11	PRIYA T	912617105003	III & V
12	SAJINA K	912617105004	III & V
13	SELSIYA R	912617105005	III & V
14	THENMOZHI J	912617105006	III & V
15	VANITHA E	912617105007	III & V
16	SIYAMALADEVI S	912617105302	III & V
17	ABIRAMI M	912616105001	IV & VII
18	AJITHA R	912616105002	IV & VII
19	GIRIJA V	912616105003	IV & VII
20	JOTHIKA A	912616105006	IV & VII
21	KARUNAMBIGAI A	912616105007	IV & VII
22	PRASANNA K	912616105008	IV & VII
23	SARANYA G	912616105009	IV & VII


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24	SNEHA V	912616105010	IV & VII
25	SUBHASRI T	912616105011	IV & VII
26	SURIYAKALA R	912616105013	IV & VII
27	MAHESWARI R	912616105301	IV & VII
28	PRINCY ROSELIN I	912616105302	IV & VII


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KAIKKURICHI, PUDUKKOTTAI-622 303

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019-2020 / ODD SEMESTER

ATTENDANCE SHEET FOR VALUE ADDED COURSE

ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS

S.NO	REG. NO	NAME	YEAR/ SEM	24.06.19		25.06.19		26.06.19		27.06.19		28.06.19		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	912618105001	AARTHI G	II & III	/	/	/	/	/	/	/	/	/	/	10	G. Arthi
2	912618105002	AASHA R	II & III	/	/	/	/	/	/	/	/	/	/	10	R. Asha
3	912618105003	AGARI S	II & III	/	a	/	/	/	/	/	/	/	/	09	S. Agari
4	912618105004	JEEVITHA R	II & III	/	/	/	/	/	/	/	/	/	/	10	P. Jeevitha
5	912618105005	NISHA K	II & III	/	/	/	/	/	/	/	/	/	/	10	S. Nisha
6	912618105006	RAMANA R	II & III	/	/	/	/	/	a	/	/	/	/	09	P. Ramana
7	912618105007	SNEHA S	II & III	/	/	/	/	/	/	/	/	/	/	10	S. Sneha

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8	912618105301	VINOTHINI V	II & III	/	/	/	/	/	/	/	/	/	/	10	V. Vinod
9	912617105001	NAZEERA BANU I	III & V	/	/	/	/	/	/	/	/	/	/	10	L. Annapurna
10	912617105002	PARTHIKA S	III & V	/	/	/	/	/	/	/	/	/	/	10	S. Parthika
11	912617105003	PRIYA T	III & V	/	/	/	/	/	/	/	/	/	/	10	P. Priya
12	912617105004	SAJINA K	III & V	/	/	/	/	/	/	/	/	/	/	10	K. Sajina
13	912617105005	SELSIYA R	III & V	/	/	/	/	/	/	/	/	/	/	10	R. Selsiya
14	912617105006	THENMOZHI J	III & V	/	/	/	/	/	/	/	/	/	/	10	J. Thenmohi
15	912617105007	VANITHA E	III & V	/	/	/	/	/	/	/	/	/	/	10	E. Vanitha
16	912617105302	SIYAMALADEVI S	III & V	/	/	/	/	/	/	/	/	/	/	10	S. Siamaladevi
17	912616105001	ABIRAMI M	IV & VII	/	/	/	/	/	/	/	/	/	/	10	M. Abirami
18	912616105002	AJITHA R	IV & VII	/	/	/	/	/	/	/	/	/	/	10	R. Ajitha
19	912616105003	GIRIJA V	IV & VII	/	/	/	/	/	/	/	/	/	/	10	V. Girija
20	912616105006	JOTHIKA A	IV & VII	/	/	/	/	/	/	/	/	/	/	10	A. Jothika
21	912616105007	KARUNAMBIGAI A	IV & VII	/	/	/	/	/	/	/	/	/	/	10	A. Karunambigai
22	912616105008	PRASANNA K	IV & VII	/	/	/	/	/	/	/	/	/	/	10	K. Prasanna
23	912616105009	SARANYA G	IV & VII	/	/	/	/	/	/	/	/	/	/	10	G. Saranya

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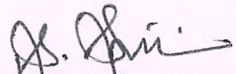
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24	912616105010	SNEHA V	IV & VII	/	a	/	/	/	/	/	/	/	/	09	Sneha
25	912616105011	SUBHASRI T	IV & VII	/	/	/	/	/	/	/	/	/	/	10	Subashini
26	912616105013	SURIYAKALA R	IV & VII	/	/	/	/	/	/	/	/	/	/	10	R. Suriyakala
27	912616105301	MAHESWARI R	IV & VII	/	/	/	/	/	/	/	/	/	/	10	Maheshwari
28	912616105302	PRINCY ROSELIN I	IV & VII	/	/	/	/	/	/	/	/	/	/	10	Princy Roselin


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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Report on Value Added Course

Title:	ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS				
Resource Person:	1.K.Kamaraj, Co-Founder, Power Integrated Solutions PVT LTD, #10A/3 Radhakrishna Colony, Sastri Road, Thennur,Trichy-17.		2. R.Anbalagan Senior Engineer		
Date of conduct from :	24.June.2019	To:	28.June.2019	Duration:	30 Hours
Organized Department :	ELECTRICAL AND ELECTRONICS ENGINEERING				
Participant Year:	2/ 3 /4	Semester:	ODD	No. of Students Registered :	28
Venue:	Tutorial Hall:42,SBECW				

Outcome of Value Added Course (VAC)

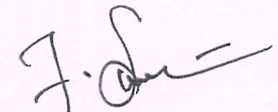
At the end of the Course, Students can able to

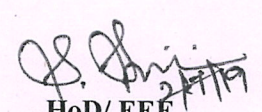
- Explain about the basics of electrical control system and their classifications.
- Describe about the design, installation, testing and monitoring of electrical network systems.
- Obtain the insight about optimizing control techniques.
- Comprehend about fully automated system with stability analysis.
- Demonstrate about robust control system and intelligent control schemes.
- Illustrated about simulation of electrical control techniques with a systematic approach to digital logic design.

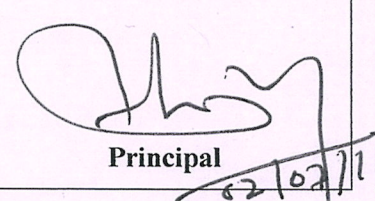
No. of students successfully completed the VAC course is 28 students based on the following assessment process.

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


Principal


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PUDUKKOTTAI - 622 303.

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COLLEGE FOR WOMEN
KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT

CERTIFICATE OF COMPLETION

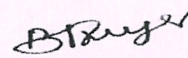


Power Integrated Solutions
#10A/3 Radhakrishna Colony,
Sastri Road, Thennur, Trichy-17
powerintegratedsolutions@gmail.com

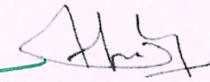
This is to certify that Mr/Ms AARTHI G, Reg No 912618105001 has successfully completed the value-added program on “ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS” conducted at Sri Bharathi Engineering College for Women, Pudukkottai in association with Power Integrated Solutions, Trichy from 24.06.2019 to 28.06.2019.



HR Manager.
HR MANAGER
Power Integrated Solutions


HOD/EEE
SBECW


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


PRINCIPAL
SBECW

CERTIFICATE OF COMPLETION



Power Integrated Solutions
#10A/3 Radhakrishna Colony,
Sastri Road, Thennur, Trichy-17
powerintegratedsolutions@gmail.com

This is to certify that Mr/Ms SAJINA K, Reg No 912617105004 has successfully completed the value-added program on “ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS” conducted at Sri Bharathi Engineering College for Women, Pudukkottai in association with Power Integrated Solutions, Trichy from 24.06.2019 to 28.06.2019.

H. H. H.
HR Manager.

HR MANAGER

Power Integrated Solutions

HOD/EEE *Dr. S. Thilagavathi* PRINCIPAL

SBECW

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COLLEGE FOR WOMEN
Kaikkuruchi - 622 303 Pudukkottai Dt.

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CERTIFICATE OF COMPLETION



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Sastri Road, Thennur, Trichy-17
powerintegratedsolutions@gmail.com

This is to certify that Mr/Ms SUBHASRI T, Reg No 912616105011 has successfully completed the value-added program on “ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS” conducted at Sri Bharathi Engineering College for Women, Pudukkottai in association with Power Integrated Solutions, Trichy from 24.06.2019 to 28.06.2019.

H. H.
HR Manager.

HR MANAGER

Power Integrated Solutions

B. S. Thilagavathi

HOD/EEE

SBECW

S. Thilagavathi

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

PRINCIPAL

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019-2020 / ODD SEMESTER

VALUE ADDED COURSE

ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS.

Name of student:

Year/Sem:

AU Reg.No:

MULTIPLE CHOICE QUESTIONS (25 X1 =25 MARKS)


1. What is Control System?
 - a) Control system is a system in which the output is controlled by varying the input
 - b) Control system is a device that will not manage or regulate the behavior of other devices using control loops
 - c) Control system is a feedback system that can be both positive and negative
 - d) Control System is a system in which the input is controlled by varying the output

2. Which of the following is not the feature of a modern control system?
 - a) Correct power level
 - b) No oscillation
 - c) Quick response
 - d) Accuracy

3. A control system working under unknown random actions is called _____
 - a) Adaptive control system
 - b) Stochastic control system
 - c) Computer control system
 - d) Digital data system

4. Which of the following element is not used in an automatic control system?
 - a) Final control element
 - b) Sensor
 - c) Oscillator
 - d) Error detector

5. A major part of the automatic control theory applies to the:
 - a) Casual systems
 - b) Linear Time invariant systems
 - c) Time variant systems
 - d) Non-linear systems


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

6. Traffic light system is the example of:
 - a) Open-loop system
 - b) Closed-loop system
 - c) Both (a) and (b)
 - d) None of these

7. The impulse response of an RL circuit is:
 - a) Parabolic function
 - b) Step function
 - c) Rising exponential function
 - d) Decaying exponential function


8. Which of the following is an open loop control system?
 - a) Ward Leonard control
 - b) Metadyne
 - c) Stroboscope
 - d) Field controlled D.C. motor

9. What should be the nature of bandwidth for a good control system?
 - a) Small
 - b) Medium
 - c) Large
 - d) All of the mentioned

10. Which of the following statement is true about Feedback control system?
 - a) Equally sensitive to forward feedback path parameter changes
 - b) Insensitive to both forward and feedback path parameter changes
 - c) Less sensitive to feedback path parameter changes than to forward path parameter changes
 - d) Less sensitive to forward path parameter changes than to feedback path parameter changes

11. In a stable control system backlash can cause which of the following?
 - a) Overdamping
 - b) Low-level oscillations
 - c) Underdamping
 - d) Poor stability at reduced values of open loop gain

12. In a control system the output of the controller is given to
 - a) Amplifier
 - b) Sensor
 - c) Final control element
 - d) Comparator


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019-2020 / ODD SEMESTER

VALUE ADDED COURSE
ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS.

ANSWER KEY FOR MCQ

1	a	2	b	3	b	4	c	5	b
6	a	7	d	8	d	9	c	10	d
11	b	12	c	13	b	14	d	15	a
16	d	17	b	18	d	19	d	20	a
21	c	22	d	23	a	24	d	25	a


Dr. **S. THILAGAVATHI M.E., Ph.D.,**
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019-2020 / ODD SEMESTER

VALUE ADDED COURSE

ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS.

Name of student: G. AARTHAN

Year/Sem: II / III

20

25

AU Reg.No: 912618105001

MULTIPLE CHOICE QUESTIONS (25 X1 =25 MARKS)


1. What is Control System?
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 - b) Stochastic control system
 - c) Computer control system
 - d) Digital data system

4. Which of the following element is not used in an automatic control system?
 - a) Final control element
 - b) Sensor
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5. A major part of the automatic control theory applies to the:
 - a) Casual systems
 - b) Linear Time invariant systems
 - c) Time variant systems
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- c) Steady state accuracy d) All of the mentioned
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a) Signal of fixed amplitude not dependent on desired variable value
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24. Sampling is necessary _____
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2019-2020 / ODD SEMESTER

VALUE ADDED COURSE

ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS.

Name of student: T. Priya
Year/Sem: III / V

(21
25)

AU Reg.No: 912617105003

MULTIPLE CHOICE QUESTIONS (25 X1 =25 MARKS)

1. What is Control System?
 - a) Control system is a system in which the output is controlled by varying the input
 - b) Control system is a device that will not manage or regulate the behavior of other devices using control loops
 - c) Control system is a feedback system that can be both positive and negative
 - d) Control System is a system in which the input is controlled by varying the output

2. Which of the following is not the feature of a modern control system?
 - a) Correct power level
 - b) No oscillation
 - c) Quick response
 - d) Accuracy

3. A control system working under unknown random actions is called _____
 - a) Adaptive control system
 - b) Stochastic control system
 - c) Computer control system
 - d) Digital data system

4. Which of the following element is not used in an automatic control system?
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5. A major part of the automatic control theory applies to the:
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6. Traffic light system is the example of:
 - a) Open-loop system
 - b) Closed-loop system
 - c) Both (a) and (b)
 - d) None of these

7. The impulse response of an RL circuit is:
 - a) Parabolic function
 - b) Step function
 - c) Rising exponential function
 - d) Decaying exponential function


8. Which of the following is an open loop control system?
 - a) Ward Leonard control
 - b) Metadyne
 - c) Stroboscope
 - d) Field controlled D.C. motor

9. What should be the nature of bandwidth for a good control system?
 - a) Small
 - b) Medium
 - c) Large
 - d) All of the mentioned

10. Which of the following statement is true about Feedback control system?
 - a) Equally sensitive to forward feedback path parameter changes
 - b) Insensitive to both forward and feedback path parameter changes
 - c) Less sensitive to feedback path parameter changes than to forward path parameter changes
 - d) Less sensitive to forward path parameter changes than to feedback path parameter changes

11. In a stable control system backlash can cause which of the following?
 - a) Overdamping
 - b) Low-level oscillations
 - c) Underdamping
 - d) Poor stability at reduced values of open loop gain

12. In a control system the output of the controller is given to
 - a) Amplifier
 - b) Sensor
 - c) Final control element
 - d) Comparator


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ACADEMIC YEAR 2019-2020 / ODD SEMESTER

VALUE ADDED COURSE

ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS.

Name of student: V. Sneha

Year/Sem: IV / VII

24

25

AU Reg.No: 912616105010

MULTIPLE CHOICE QUESTIONS (25 X1 =25 MARKS)

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ACADEMIC YEAR 2019-2020 / ODD SEMESTER

MARK SHEET FOR VALUE ADDED COURSE

ELECTRICAL CONTROL DESIGN IN REAL TIME APPLICATIONS

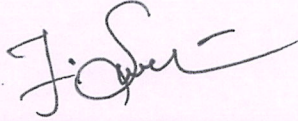
S.NO	REG. NO	NAME	YEAR/ SEM	ATTENDANCE 50% (A)		VAC -MCQ 50%(B)		OVERALL MARK (A+B)
				No of Session Attended	MARKS	No of Correct Answer	MARKS	
1	912618105001	AARTHI G	II & III	10	100	20	80	90
2	912618105002	AASHA R	II & III	10	100	23	92	96
3	912618105003	AGARI S	II & III	9	90	20	80	85
4	912618105004	JEEVITHA R	II & III	10	100	24	96	98
5	912618105005	NISHA K	II & III	10	100	21	84	92
6	912618105006	RAMANA R	II & III	9	90	24	96	93
7	912618105007	SNEHA S	II & III	10	100	20	80	90
8	912618105301	VINOTHINI V	II & III	10	100	23	92	96
9	912617105001	NAZEERA BANU I	III & V	10	100	20	80	90
10	912617105002	PARTHIKA S	III & V	10	100	24	96	98
11	912617105003	PRIYA T	III & V	10	100	21	84	92
12	912617105004	SAJINA K	III & V	10	100	23	92	96
13	912617105005	SELSIYA R	III & V	10	100	24	96	98
14	912617105006	THENMOZHI J	III & V	10	100	20	80	90
15	912617105007	VANITHA E	III & V	10	100	20	80	90
16	912617105302	SIYAMALADEVI S	III & V	10	100	24	96	98
17	912616105001	ABIRAMI M	IV & VII	10	100	21	84	92

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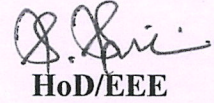
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18	912616105002	AJITHA R	IV & VII	10	100	20	80	90
19	912616105003	GIRIJA V	IV & VII	10	100	24	96	98
20	912616105006	JOTHIKA A	IV & VII	10	100	21	84	92
21	912616105007	KARUNAMBIGAI A	IV & VII	10	100	23	92	96
22	912616105008	PRASANNA K	IV & VII	10	100	24	96	98
23	912616105009	SARANYA G	IV & VII	10	100	20	80	90
24	912616105010	SNEHA V	IV & VII	9	90	24	96	93
25	912616105011	SUBHASRI T	IV & VII	10	100	23	92	96
26	912616105013	SURIYAKALA R	IV & VII	10	100	20	80	90
27	912616105301	MAHESWARI R	IV & VII	10	100	24	96	98
28	912616105302	PRINCY ROSELIN I	IV & VII	10	100	21	84	92



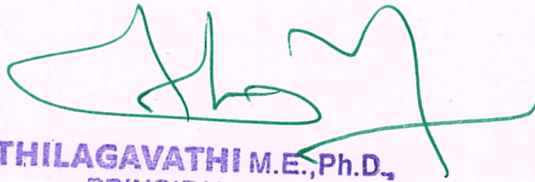
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