Indra Ganesan
COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Accredited by NAAC with 'B+' Grade, 2(f) & 12B Status Institution by UGC

IG Valley, Madurai Main Road, Manikandam, Tiruchirappalli - 620012

NAAC DOCUMENTS

QUALITY INDICATOR FRAME WORK

CRITERION – 2

TEACHING-LEARNING AND EVALUATION

SUBMITTED BY

IQAC

INTERNAL QUALITY ASSURANCE CELL

INDRA GANESAN COLLEGE OF ENGINEERING

Criteria2	Teaching-Learning and Evaluation	350

KeyIndicator-2.3.Teaching-Learning Process (40)

2022-2023

PARTICIPATIVE LEARNING

ELECTRICAL AND ELECTRONICS ENGINEERING

Activity	Number of Students Attended	Page No.
Value Added Course(VAC)	64	3
TOTAL STUDENTS ATTENDED	64	-

Criteria2	Teaching-Learning and Evaluation	350

KeyIndicator-2.3.Teaching-LearningProcess(40)

2022-2023

ELECTRICAL AND ELECTRONICS ENGINEERING

PARTICIPATIVE LEARNING

VALUE ADDED COURSE

Indra Ganesan
COLLEGE OF ENGINEERING
Madurai Main Road (NH-45B), Manikandam, Tiruchirappalli - 620 012
Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennai
NAAC Accredited, 2(F) Status Institution by UGC

Department of Electrical and Electronics Engineering

Academic Year 2022-2023 –Odd Semester

25.01.2023

DEPARTMENT CIRCULAR

Department of Electrical and Electronics Engineering and IQAC of IGCE in association with Startus Electric, Trichy is going to organize Value Added Course for all second, Third and Final year students on "Power Grid Protection" from 30.01.2023 to 03.02.2023. Certificates will be issued to the eligible participants at the end of the Course. This training is to be provided in our campus.

Resource Person Detail	1. Mr.M.Elangovan, Trainer, Startus Electric , Trichy.
Venue	EEE III yr Classroom, IGCE

G. Ma Lath
HOD/EEE

Principal

Cc:

- Principal office
- IQAC Co-Ordinator
- Class In charges - II, III & IV-Year
- II, III & IV-Year EEE Students
- Office File
- Notice Board

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

Indra Ganesan
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NAAC Accredited, 2(F) Status Institution by UGC

Value Added Course

"Power Grid Protection"

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	Fundamentals of Power System	3	30.01.2023
2	Fundamentals of Protective Relaying	3	30.01.2023
3	Current based Relaying Scheme	3	31.01.2023
4	Protection of Transmission Lines using Distance Relays	3	31.01.2023
5	Carrier Aided Schemes for Transmission Lines and Auto-reclosing and Synchronizing	3	01.02.2023
6	Protection of Generators, Transformers, Induction Motors and Bus bars	3	01.02.2023
7	Protection against Transients and Surges along with System Response to Severe Upsets	3	02.02.2023
8	Arc Interruption Theory in Circuit Breaker,	3	02.02.2023
9	Types of Circuit Breakers and their Testing	3	03.02.2023
10	Testing, Commissioning and Maintenance of Relays	3	03.02.2023
11	Exam	1	03.02.2023
	Total Hours (Excluding Exam)	30	-

VAC Coordinator

G. Malathi
HoD/EEE

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Value Added Course

"Power Grid Protection"

STUDENTS PARTICIPATION LIST

S.NO	Register Number	Name	Department
1	811219105002	M.BARATH	IV/EEE
2	811219105003	A.MANIKANDAN	IV/EEE
3	811219105005	C.PONNALAGU	IV/EEE
4	811219105006	A.SALAMON	IV/EEE
5	811219105007	M.SARAVANAKUMAR	IV/EEE
6	811219105008	K.SOLAIMATHI	IV/EEE
7	813919105001	P.DHEVENTHIRAN	IV/EEE
8	811219105301	A. VENKATRAMAN	IV/EEE
9	811220105001	ABINESH T	III/EEE
10	811220105002	ALEX IMMANVEL S	III/EEE
11	811220105006	BALAMURUGAN A	III/EEE
12	811220105011	DIVYA B	III/EEE
13	811220105013	GAYATHRI M	III/EEE
14	811220105017	KARTHIK D	III/EEE
15	811220105019	LATCHIYA K	III/EEE
16	811220105022	MANIKANDAN K	III/EEE
17	811220105023	MOHANDOSS S	III/EEE

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S.NO	Register Number	Name	Department
18	811220105024	NAVEEN R	III/EEE
19	811220105031	SANDURU K	III/EEE
20	811220105032	SANTHIYA A	III/EEE
21	811220105035	SHANMUGAM S	III/EEE
22	811220105037	SNEKA T	III/EEE
23	811220105038	SOPHIYA K	III/EEE
24	811220105301	AARTHI S	III/EEE
25	811220105303	THIRUNAVUKARASU M	III/EEE
26	811220105305	VENKATESHWARAN.A	III/EEE
27	811220105306	DIVYA BHARATHI	III/EEE
28	811220105307	SATHEESH KUMAR	III/EEE
29	811221105012	HARIHARAN E	II/EEE
30	811221105018	LINGESWARAN R	II/EEE
31	811221105027	SANGILI S	II/EEE
32	811221105039	SRIKANTH M	II/EEE

VAC Coordinator

G. Malathi
HoD/EEE

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Department of Electrical and Electronics Engineering

Academic Year 2022-2023 – Odd Semester

STUDENTS ATTENDANCE LIST

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

Value Added Course

"Power Grid Protection"

S.NO	Register Number	Name	YEAR/ BRANCH	30.01.2023		31.01.2023		01.02.2023		02.02.2023		03.02.2023		NO OF SESSIONS ATTENDED	SIGNA OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	811219105002	M.BARATH	IV/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	M. Barath
2	811219105003	A.MANIKANDAN	IV/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	A. Manik.
3	811219105005	C.PONNALAGU	IV/EEE	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	9	C. Pon.
4	811219105006	A.SALAMON	IV/EEE	✓	✓	✓	✓	✓	✓	✓	a	✓	✓	9	A. Sal.
5	811219105007	M.SARAVANAKUMAR	IV/EEE	✓	a	✓	✓	✓	✓	✓	✓	✓	✓	9	M. Sara.
6	811219105008	K.SOLAIMATHI	IV/EEE	✓	✓	✓	✓	✓	a	✓	✓	✓	✓	9	Rohini
7	813919105001	P.DHEVENTHIRAN	IV/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Dheve.
8	811219105301	A. VENKATRAMAN	IV/EEE	✓	✓	✓	✓	a	✓	✓	✓	✓	✓	9	Venkat.
9	811220105001	ABINESH T	III/EEE	a	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	Abi.
10	811220105002	ALEX IMMANVEL S	III/EEE	✓	✓	a	✓	✓	✓	✓	✓	✓	✓	9	Alex
11	811220105006	BALAMURUGAN A	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Balamu.
12	811220105011	DIVYA B	III/EEE	✓	✓	✓	✓	✓	✓	a	✓	✓	✓	9	Divya
13	811220105013	GAYATHRI M	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Gayath.

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S.NO	Register Number	Name	YEAR/ BRANCH	30.01.2023		31.01.2023		01.02.2023		02.02.2023		03.02.2023		NO OF SESSIONS ATTENDED	SIGNA OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
14	811220105017	KARTHIK D	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
15	811220105019	LATCHIYA K	III/EEE	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	9	
16	811220105022	MANIKANDAN K	III/EEE	✓	✓	✓	✓	a	a	✓	✓	✓	✓	8	
17	811220105023	MOHANDOSS S	III/EEE	a	a	✓	✓	✓	✓	✓	✓	✓	✓	8	
18	811220105024	NAVEEN R	III/EEE	✓	✓	✓	✓	✓	✓	✓	a	✓	✓	9	
19	811220105031	SANDURU K	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
20	811220105032	SANTHIYA A	III/EEE	✓	✓	a	✓	✓	✓	✓	✓	✓	✓	9	
21	811220105035	SHANMUGAM S	III/EEE	✓	✓	✓	✓	✓	✓	a	a	✓	✓	8	
22	811220105037	SNEKA T	III/EEE	✓	✓	✓	a	✓	✓	✓	✓	✓	a	9	
23	811220105038	SOPHIYA K	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
24	811220105301	AARTHI S	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
25	811220105303	THIRUNAVUKARASU M	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
26	811220105305	VENKATESHWARAN.A	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
27	811220105306	DIVYA BHARATHI	III/EEE	a	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	
28	811220105307	SATHEESH KUMAR	III/EEE	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	9	
29	811221105012	HARIHARAN E	II/EEE	✓	a	✓	✓	✓	✓	✓	✓	✓	✓	9	
30	811221105018	LINGESWARAN R	II/EEE	✓	✓	✓	✓	✓	a	✓	✓	✓	✓	9	
31	811221105027	SANGILI S	II/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
32	811221105039	SRIKANTH M	II/EEE	✓	✓	✓	✓	a	✓	✓	✓	✓	✓	9	

VAC Coordinator

Dr. G. Balakrishnan, M.E., Ph.D.,
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Manikandam, Trichy-620 012.

HOD/EEE

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Name of the Student: **Year/Sem:**

AU Register Number:

Value Added Course

"Power Grid Protection"

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

1. **Which of the following circuit breakers has the lowest operating voltage?**

(a) SF6 gas. (b) Air-break. c) Air-blast. (d) Minimum oil.

2. **Which of the following circuit breakers produce the least arc energy?**

(a) Plain oil. (b) Minimum oil. (c) Air-blast. (d) Air break.

3. **Which of the following circuit breakers has high reliability and negligible maintenance?**

(a) Air-blast. (b) SF6 (c) Oil. (d) Vacuum.

4. **Which of the following circuit breakers take minimum time in installation?**

(a) Air-blast. (b) Minimum oil. (c) Bulk oil. (d) SF6

5. **Where voltages are high and current to be interrupted is low, the circuit breaker preferred is……..one.**

(a) air-break (b) vacuum (c) oil (d) air-blast

6. **For rural electrification in a country like India with complex network, the circuit breaker preferred is……one.**

(a) air-break (b) oil (c) vacuum (d) minimum oil

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

7. The most suitable circuit breaker for short line fault without switching resistor is……..one.

(a) Minimum oil (b) air-blast (c) SF6 (d) air-break

8. The rating of a circuit breaker is usually determined on the basis of……..fault.

(a) Symmetrical (b) line to line
(c) single line to ground (d) double line to ground

9. The transient phenomenon lasts in a power system for a period ranging from

(a) Few ms to 1 s (b) 1 s to 2 s (c) 2 s to 3 s. (d) greater than 3 s.

10. Circuit breakers usually operate under

(a) Steady short-circuits current. (b) Sub-transient state of short-circuit current.
(c) Transient state of short-circuit current. (d) None of these

11. The restriking voltage is measured in

(a) RMS value. (b) Peak value. (c) Instantaneous value. (d) Average value.

12. The making and breaking currents of 3-phase ac circuit breakers in power system are respectively in what form?

(a) rms value, rms value. (b) Instantaneous value, rms value.
(c) rms value. (d) Instantaneous value, instantaneous value.

13. The making to breaking current ratio for an EHV circuit breaker is

(a) More than 1. (b) Equal to 1. (c) Less than 1. (d) A negative number.

14. The making capacity of a circuit breaker is

(a) Less than the asymmetrical breaking capacity of the breaker.
(b) Greater than the asymmetrical breaking capacity of the breaker.
(c) Equal to the symmetrical breaking capacity of the breaker.
(d) Equal to the asymmetrical breaking capacity.

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15. Which of the following statements is not correct?

(a) Arc chutes are used in air break circuit breakers.
(b) Air-blast circuit breakers are employed for high voltage traction system.
(c) Resistance switching is employed for overcoming current chopping.
(d) Linear resistors are used in resistance switching.

16. Capacitor switching in 33 kV power systems is better done with.....circuit breakers.

(a) air-blast (b) minimum oil (c) vacuum

17. The probable cause(s) for fall in insulation resistance between phase terminal and earthed frame could be

(a) Dirty insulation surface.
(b) Ingress of moisture.
(c) Sticking of carbon or copper particles to the internal surface.
(d) all of the above.

18. The probable cause(s) for failure of a circuit breaker on electrical compound could be

(a) Trip circuit open. (b) Trip latch defective.
(c) Spring defective. (d) Any of the above.

19. An isolator is installed

(a) To isolate one portion of the circuit from another.
(b) Usually on both sides of a circuit breaker.
(c) As a substitute for a circuit breaker.
(d) Both (a) and (b).

20. Current rating is not necessary in case of

(a) Isolators. (b) Circuit breakers.
(c) Load break switches. (d) Circuit breakers and load break switches.

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21. An isolator is meant for

(a) Breaking abnormal current. **(b) Making under fault condition.**
(c) Breaking the circuit under no-load condition. **(d) None of the above.**

22. Isolators used in transmission lines are capable of breaking:

(a) Fault current. (b) No current.
(c) Charging current. (d) All the above

23. For a fault at the terminals of synchronous generator, the fault current is maximum for a

(a) 3-phase fault. (b) 3-phase to ground fault.
(c) line-to-ground fault. (d) line-to-line fault.

24. If all the sequence voltages at the fault point in a power system are equal, then the fault is a

(a) three-phase fault. (b) line-to ground fault.
(c) line-to-line fault. (d) double-line-to ground fault.

25. The material used in liquid fuses is

(a) SF6 (b) distilled water. (c) Carbon tetra chloride. (d) Transformer oil.

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Value Added Course

"Power Grid Protection"

Answer Key

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

VAC Coordinator

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Name of the Student: M. Barath **Year/Sem:** IV / VII

AU Register Number: 811219105002

20/25

Value Added Course

"Power Grid Protection"

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

1. **Which of the following circuit breakers has the lowest operating voltage?**

(a) SF6 gas. (b) Air-break. c) Air-blast. (d) Minimum oil.

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(a) Plain oil. (b) Minimum oil. (c) Air-blast. (d) Air break.

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4. **Which of the following circuit breakers take minimum time in installation?**

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5. **Where voltages are high and current to be interrupted is low, the circuit breaker preferred is……..one.**

(a) air-break (b) vacuum (c) oil (d) air-blast

6. **For rural electrification in a country like India with complex network, the circuit breaker preferred is……one.**

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7. The most suitable circuit breaker for short line fault without switching resistor is……..one.

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(a) Isolators. (b) Circuit breakers.
(c) Load break switches. (d) Circuit breakers and load break switches.

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(c) Charging current. (d) All the above

23. For a fault at the terminals of synchronous generator, the fault current is maximum for a

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Name of the Student: HARIHARAN.E **Year/Sem:** II/III

AU Register Number: 8112 21105012

19/25

Value Added Course

"Power Grid Protection"

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

1. **Which of the following circuit breakers has the lowest operating voltage?**

(a) SF6 gas. (b) Air-break. c) Air-blast. (d) Minimum oil.

2. **Which of the following circuit breakers produce the least arc energy?**

(a) Plain oil. (b) Minimum oil. (c) Air-blast. (d) Air break.

3. **Which of the following circuit breakers has high reliability and negligible maintenance?**

(a) Air-blast. (b) SF6 (c) Oil. (d) Vacuum.

4. **Which of the following circuit breakers take minimum time in installation?**

(a) Air-blast. (b) Minimum oil. (c) Bulk oil. (d) SF6

5. **Where voltages are high and current to be interrupted is low, the circuit breaker preferred is……..one.**

(a) air-break (b) vacuum (c) oil (d) air-blast

6. **For rural electrification in a country like India with complex network, the circuit breaker preferred is……one.**

(a) air-break (b) oil (c) vacuum (d) minimum oil

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

7. The most suitable circuit breaker for short line fault without switching resistor is……..one.

(a) Minimum oil (b) air-blast (c) SF6 (d) air-break

8. The rating of a circuit breaker is usually determined on the basis of……..fault.

(a) Symmetrical (b) line to line
(c) single line to ground (d) double line to ground

9. The transient phenomenon lasts in a power system for a period ranging from

(a) Few ms to 1 s (b) 1 s to 2 s (c) 2 s to 3 s. (d) greater than 3 s.

10. Circuit breakers usually operate under

(a) Steady short-circuits current. (b) Sub-transient state of short-circuit current.
(c) Transient state of short-circuit current. (d) None of these

11. The restriking voltage is measured in

(a) RMS value. (b) Peak value. (c) Instantaneous value. (d) Average value.

12. The making and breaking currents of 3-phase ac circuit breakers in power system are respectively in what form?

(a) rms value, rms value. (b) Instantaneous value, rms value.
(c) rms value. (d) Instantaneous value, instantaneous value.

13. The making to breaking current ratio for an EHV circuit breaker is

(a) More than 1. (b) Equal to 1. (c) Less than 1. (d) A negative number.

14. The making capacity of a circuit breaker is

(a) Less than the asymmetrical breaking capacity of the breaker.
(b) Greater than the asymmetrical breaking capacity of the breaker.
(c) Equal to the symmetrical breaking capacity of the breaker.
(d) Equal to the asymmetrical breaking capacity.

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15. Which of the following statements is not correct?

(a) Arc chutes are used in air break circuit breakers.
(b) Air-blast circuit breakers are employed for high voltage traction system.
(c) Resistance switching is employed for overcoming current chopping.
(d) Linear resistors are used in resistance switching.

16. Capacitor switching in 33 kV power systems is better done with.....circuit breakers.

(a) air-blast (b) minimum oil (c) vacuum

17. The probable cause(s) for fall in insulation resistance between phase terminal and earthed frame could be

(a) Dirty insulation surface.
(b) Ingress of moisture.
(c) Sticking of carbon or copper particles to the internal surface.
(d) all of the above.

18. The probable cause(s) for failure of a circuit breaker on electrical compound could be

(a) Trip circuit open. (b) Trip latch defective.
(c) Spring defective. (d) Any of the above.

19. An isolator is installed

(a) To isolate one portion of the circuit from another.
(b) Usually on both sides of a circuit breaker.
(c) As a substitute for a circuit breaker.
(d) Both (a) and (b).

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20. Current rating is not necessary in case of

(a) Isolators. (b) Circuit breakers.
(c) Load break switches. (d) Circuit breakers and load break switches.

21. An isolator is meant for

(a) Breaking abnormal current. (b) Making under fault condition.
(c) Breaking the circuit under no-load condition. (d) None of the above.

22. Isolators used in transmission lines are capable of breaking:

(a) Fault current. (b) No current.
(c) Charging current. (d) All the above

23. For a fault at the terminals of synchronous generator, the fault current is maximum for a

(a) 3-phase fault. (b) 3-phase to ground fault.
(c) line-to-ground fault. (d) line-to-line fault.

24. If all the sequence voltages at the fault point in a power system are equal, then the fault is a

(a) three-phase fault. (b) line-to ground fault.
(c) line-to-line fault. (d) double-line-to ground fault.

25. The material used in liquid fuses is

(a) SF6 (b) distilled water. (c) Carbon tetra chloride. (d) Transformer oil.

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NAAC Accredited, 2(F) Status Institution by UGC

Name of the Student: B. DIVYA **Year/Sem:** III / V

AU Register Number: 811220105011

20/25

Value Added Course

"Power Grid Protection"

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

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Department of Electrical and Electronics Engineering

Academic Year 2022-2023 – Odd Semester

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

VALUE ADDED COURSE ASSESMENT SHEET

"Power Grid Protection"

S.NO	Register Number	Name	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERAM MARK (100)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	(50% of A + 50% of B)
1	811219105002	M.BARATH	IV/EEE	30	100	20	80	90
2	811219105003	A.MANIKANDAN	IV/EEE	30	100	20	80	90
3	811219105005	C.PONNALAGU	IV/EEE	27	90	21	84	87
4	811219105006	A.SALAMON	IV/EEE	27	90	21	84	87
5	811219105007	M.SARAVANAKUMAR	IV/EEE	27	90	22	88	89
6	811219105008	K.SOLAIMATHI	IV/EEE	27	90	19	76	83
7	813919105001	P.DHEVENTHIRAN	IV/EEE	30	100	20	80	90
8	811219105301	A. VENKATRAMAN	IV/EEE	27	90	23	92	91
9	811220105001	ABINESH T	III/EEE	27	90	19	76	83
10	811220105002	ALEX IMMANVEL S	III/EEE	27	90	19	76	83
11	811220105006	BALAMURUGAN A	III/EEE	30	100	21	84	92

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Manikandam, Trichy-620 012.

S.NO	Register Number	Name	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK (100)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	(50% of A + 50% of B)
12	811220105011	DIVYA B	III/EEE	27	90	20	80	85
13	811220105013	GAYATHRI M	III/EEE	30	100	21	84	92
14	811220105017	KARTHIK D	III/EEE	30	100	20	80	90
15	811220105019	LATCHIYA K	III/EEE	27	90	19	76	83
16	811220105022	MANIKANDAN K	III/EEE	24	80	20	80	80
17	811220105023	MOHANDOSS S	III/EEE	24	80	21	84	82
18	811220105024	NAVEEN R	III/EEE	27	90	22	88	89
19	811220105031	SANDURU K	III/EEE	30	100	20	80	90
20	811220105032	SANTHIYA A	III/EEE	27	90	21	84	87
21	811220105035	SHANMUGAM S	III/EEE	24	80	20	80	80
22	811220105037	SNEKA T	III/EEE	27	90	21	84	87
23	811220105038	SOPHIYA K	III/EEE	30	100	20	80	90
24	811220105301	AARTHI S	III/EEE	30	100	20	80	90
25	811220105303	THIRUNAVUKARASU M	III/EEE	30	100	21	84	92
26	811220105305	VENKATESHWARAN.A	III/EEE	30	100	21	84	92

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S.NO	Register Number	Name	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK (100)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	(50% of A + 50% of B)
27	811220105306	DIVYA BHARATHI	III/EEE	27	90	22	88	89
28	811220105307	SATHEESH KUMAR	III/EEE	27	90	20	80	85
29	811221105012	HARIHARAN E	II/EEE	27	90	19	76	83
30	811221105018	LINGESWARAN R	II/EEE	27	90	21	84	87
31	811221105027	SANGILI S	II/EEE	30	100	22	88	94
32	811221105039	SRIKANTH M	II/EEE	27	90	20	80	85

VAC Coordinator

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Principal
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HoD/EEE

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NAAC Accredited, 2(F) Status Institution by UGC

REPORT ON VALUE ADDED COURSE

Title:	"Power Grid Protection"
Resource Persons:	Mr.M.Elangovan, Trainer. Startus Electric , Trichy.

Date of conduct from :	30.01.2023	To:	03.02.2023	Duration:	**30 Hours**
Organized Department :	**Electrical and Electronics Engineering**				
Participant Year:	**2,3,4**			No. of Students Registered :	32
Venue:	EEE III yr Classroom				

Outcome of Value Added Course (VAC): At the end of the Course, Students can able to

- Learn the basic concepts of power system protection and relays.
- Design the relevant protection systems for the main elements of a power system.
- Learn the theory of arcing phenomenon.
- Analyze the purpose and working principle of different circuit breakers and tests.

Assessment Process

- Students, who are securing **more than 70% on total score** and secured more than 75% 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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SAMPLE PHOTOS OF VALUE ADDED COURSE

Title:	"Power Grid Protection"
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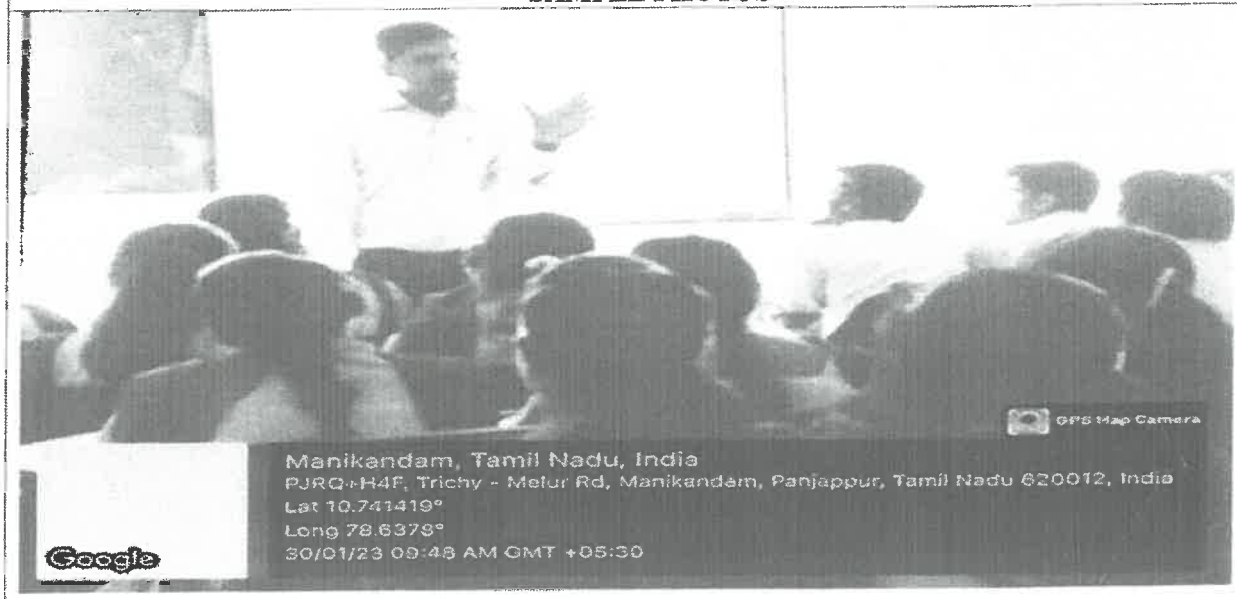
SAMPLE PHOTOS



VAC Coordinator

HoD/EEE

Principal

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
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Manikandam, Trichy-620 012.

Indra Ganesan
COLLEGE OF ENGINEERING

Madurai Main Road (NH 45B),Manikandam,Trichy-12.
Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennai

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. SANDURU K, III Year, EEE has successfully completed the Value Added Course on "Power Grid Protection" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Startus Electric from 30th January 2023 to 3rd January 2023 (5days) during the Academic year 2022-2023.

Startus Electric
Mr.L.Ramesh
Chief Executive Officer.

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

Principal
IGCE

Indra Ganesan
COLLEGE OF ENGINEERING

Madurai Main Road (NH 45B), Manikandam, Trichy-12.
Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennai

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. NAVEEN R, III Year, EEE has successfully completed the Value Added Course on "Power Grid Protection" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Startus Electric from 30th January 2023 to 3rd January 2023 (5days) during the Academic year 2022-2023.

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Mr.L.Ramesh
Chief Executive Officer.

Principal
IGCE

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Principal
Indra Ganesan College of Engineering
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COLLEGE OF ENGINEERING

Madurai Main Road (NH 45B), Manikandam, Trichy-12.
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CERTIFICATE OF PARTICIPATION

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Mr.L.Ramesh
Chief Executive Officer.

Principal
IGCE

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
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Department of Electrical and Electronics Engineering

Academic Year 2022-2023 –Even Semester

26.07.2023

DEPARTMENT CIRCULAR

Department of Electrical and Electronics Engineering and IQAC of IGCE in association with **NoviTech R&D Pvt Ltd** is going to organize Value Added Course for all Second, Third and Final year students on **"Electrical safety & maintenance"** from 01.08.2023 to 05.08.2023. Certificates will be issued to the eligible participants at the end of the Course. This training is to be provided in our campus

Resource Person Detail	1. Mr.S.Sathiyan, Trainer, NoviTech R&D Pvt Ltd Coimbatore, Tamilnadu.
Venue	EEE III yr Classroom, IGCE

G. Ma Lathi
HOD/EEE

Principal

Cc:

- Principal office
- IQAC Co-Ordinator
- Class In charges - II, III & IV-Year
- II, III & IV-Year EEE Students
- Office File
- Notice Board

Dr. G. Balakrishnan, M.E., Ph.D.,
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Value Added Course

"Electrical safety & maintenance"

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE
1	Elementary Electrical - Basics of Electricity	3	01.08.2023
2	Exposure to General Tools and Tackle Testing of wiring Installation	3	01.08.2023
3	Electrical Power System :Overview Quality of Electrical supply Power Distribution System – Basics Distribution Line equipment	3	02.08.2023
4	Transformers Major Substation Equipment Operation & Maintenance Practices	3	02.08.2023
5	Earthing	3	03.08.2023
6	Electrical System Protection	3	03.08.2023
7	Important Electricity Rules Related to Safety	3	04.08.2023
8	Electrical Safety	3	04.08.2023
9	Accident Prevention & Protection, First Aid	3	05.08.2023
10	Disaster Management	3	05.08.2023
11	Exam	1	05.08.2023
	Total Hours(Excluding Exam)	30	-

VAC Coordinator

HoD/EEE

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Value Added Course

"Electrical safety & maintenance"

STUDENTS PARTICIPATION LIST

S.No	Reg.No	Student Name	Year/ Branch
1	811219105002	M.BARATH	IV/EEE
2	811219105003	A.MANIKANDAN	IV/EEE
3	811219105005	C.PONNALAGU	IV/EEE
4	811219105006	A.SALAMON	IV/EEE
5	811219105007	M.SARAVANAKUMAR	IV/EEE
6	811219105008	K.SOLAIMATHI	IV/EEE
7	813919105001	P.DHEVENTHIRAN	IV/EEE
8	811219105301	A. VENKATRAMAN	IV/EEE
9	811220105001	ABINESH T	IV/EEE
10	811220105002	ALEX IMMANVEL S	III/EEE
11	811220105006	BALAMURUGAN A	III/EEE
12	811220105011	DIVYA B	III/EEE
13	811220105013	GAYATHRI M	III/EEE
14	811220105017	KARTHIK D	III/EEE
15	811220105019	LATCHIYA K	III/EEE
16	811220105022	MANIKANDAN K	III/EEE
17	811220105023	MOHANDOSS S	III/EEE
18	811220105024	NAVEEN R	III/EEE
19	811220105031	SANDURU K	III/EEE

S.No	Reg.No	Student Name	Year/ Branch
20	811220105032	SANTHIYA A	III/EEE
21	811220105035	SHANMUGAM S	III/EEE
22	811220105037	SNEKA T	III/EEE
23	811220105038	SOPHIYA K	III/EEE
24	811220105301	AARTHI S	III/EEE
25	811220105303	THIRUNAVUKARASU M	IV/EEE
26	811220105305	VENKATESHWARAN.A	III/EEE
27	811220105306	DIVYA BHARATHI	III/EEE
28	811220105307	SATHEESH KUMAR	III/EEE
29	811221105012	HARIHARAN E	II/EEE
30	811221105018	LINGESWARAN R	II/EEE
31	811221105027	SANGILI S	II/EEE
32	811221105039	SRIKANTH M	II/EEE

VAC Coordinator

HoD/EEE

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Manikandam, Trichy-620 012.

Indra Ganesan
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NAAC Accredited, 2(F) Status Institution by UGC

Department of Electrical and ElectronicsEngineering

Academic Year 2022-2023 – Even Semester

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

STUDENTS ATTENDANCE LIST

Value Added Course

"Electrical safety & maintenance"

S.NO	Register Number	NAME	YEAR/ BRANCH	01.08.2023		02.08.2023		03.08.2023		04.08.2023		05.08.2023		NO OF SESSIONS ATTENDED	SIGN OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	811219105002	M.BARATH	IV/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	M.Barath
2	811219105003	A.MANIKANDAN	IV/EEE	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	9	A.Mani
3	811219105005	C.PONNALAGU	IV/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	C.Ponn
4	811219105006	A.SALAMON	IV/EEE	✓	a	✓	✓	✓	✓	✓	✓	✓	✓	9	A.Sala
5	811219105007	M.SARAVANAKUMAR	IV/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	M.Sara
6	811219105008	K.SOLAIMATHI	IV/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	K.Sola
7	813919105001	P.DHEVENTHIRAN	IV/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	P.Dheve
8	811219105301	A. VENKATRAMAN	IV/EEE	✓	✓	✓	✓	✓	a	✓	✓	✓	✓	9	Venkat
9	811220105001	ABINESH T	III/EEE	✓	✓	a	✓	✓	✓	✓	✓	✓	✓	9	A.Abi
10	811220105002	ALEX IMMANVEL S	III/EEE	✓	✓	✓	✓	✓	a	✓	✓	✓	✓	9	S.Alex
11	811220105006	BALAMURUGAN A	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	A.Bala
12	811220105011	DIVYA B	III/EEE	✓	✓	✓	✓	✓	✓	✓	a	✓	✓	9	B.Divya
13	811220105013	GAYATHRI M	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	M.Gayat
14	811220105017	KARTHIK D	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	D.Karth

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S.NO	Register Number	NAME	YEAR/ BRANCH	01.08.2023		02.08.2023		03.08.2023		04.08.2023		05.08.2023		NO OF SESSIONS ATTENDED	SIGN OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
15	811220105019	LATCHIYA K	III/EEE	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	9	
16	811220105022	MANIKANDAN K	III/EEE	✓	✓	✓	✓	a	a	✓	✓	✓	✓	08	
17	811220105023	MOHANDOSS S	III/EEE	✓	✓	a	✓	a	✓	✓	✓	✓	✓	08	
18	811220105024	NAVEEN R	III/EEE	✓	✓	✓	✓	✓	✓	a	✓	✓	✓	9	
19	811220105031	SANDURU K	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
20	811220105032	SANTHIYA A	III/EEE	✓	✓	a	✓	✓	✓	✓	✓	✓	✓	09	
21	811220105035	SHANMUGAM S	III/EEE	✓	✓	✓	✓	a	✓	a	✓	✓	✓	8	
22	811220105037	SNEKA T	III/EEE	✓	✓	a	✓	✓	✓	✓	✓	✓	✓	9	
23	811220105038	SOPHIYA K	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
24	811220105301	AARTHI S	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
25	811220105303	THIRUNAVUKARASU M	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
26	811220105305	VENKATESHWARAN.A	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
27	811220105306	DIVYA BHARATHI	III/EEE	✓	✓	✓	✓	✓	a	✓	✓	✓	✓	9	
28	811220105307	SATHEESH KUMAR	III/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
29	811221105012	HARIHARAN E	II/EEE	✓	✓	✓	✓	✓	a	✓	✓	✓	✓	9	
30	811221105018	LINGESWARAN R	II/EEE	✓	✓	✓	a	✓	✓	✓	✓	✓	✓	9	
31	811221105027	SANGILI S	II/EEE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
32	811221105039	SRIKANTH M	II/EEE	✓	✓	✓	✓	a	✓	✓	✓	✓	✓	9	

VAC Coordinator

HoD/EEE

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Name of the Student: **Year/Sem:**

AU Register Number:

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Value Added Course

"Electrical safety & maintenance"

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

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2. **A Safety Electrical One Line Diagram should be used to _____ all sources of electrical energy.**

   (A) Identify (B) Castigate (C) Evaluate (D) Modify

3. **The minimum allowable workspace around electrical equipment is _____ inches deep.**

   A) 36 B) 48 C) 24 D) 30

4. **OSHA requires the testing of a voltmeter after a voltage test on voltage above_____.**

   A) 120v B) 208v C) 277v D) 600v

5. **One of the three generally recognized hazards of electrical work is____.**

   A) Arc Flash B) Cuts C) Falls D) Concussion

6. **Gloves used for electrical protection must be electrically tested every____ month.**

   A) 3 months B) 6 months C) 12 months D) Never

7. **Which of these risks is associated with electricity?**

   A) Shock B) Fire C) Explosion D) All of the above

8. **What's the first thing you should do if a co-worker is being electrocuted?**

   A) Pull them free of the power source. B) Turn off the power source.
   C) Call 911 D) Alert a foreman

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9. GFCI stands for ground fault circuit interrupter.

A) True. B) False.

10. If you're working in a damp space, what do you need to do?

A) Mop First. B) Elevate the electrical outlets and wiring.
C) Install and use ground fault circuit interrupter. D) Use heaters to dry areas.

11. If you're servicing an appliance, what's the first thing you need to do?

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C) Inspect the power lines leading into it. D) Remove any batteries

12. What is the name of the practice that involves locking down an electrical device and labeling it so others know who locked it and why?

A) Lockout/Tagout B) Lock and Label
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13. Ladders can be made from a variety of materials, but what material is best for an electrician's ladder?

A) Fiberglass B) Wood C) Aluminium D) All of the above

14. Which one of these would require that a device is replaced or repaired?

A) Frayed wire B) Cracked insulation C) Broken plug D) All of the above

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16. How is IPE different from PPE?

A) It's for higher voltage equipment. B) It covers exposed live parts, not workers.
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17. What should you assume about every electrical device when you first start work?

A) It's live. B) Its malfunctioning. C) It has a short. D) it's wired incorrectly

18. Why is it a good idea to only work with one hand whenever possible?

A) Allows for greater accuracy B) Easier to work in confined spaces
C) Reduces shock risk D) it's not a good idea.

19. What do you need to do with a capacitor before working near one?

A) Remove it. B) Ground it. C) Inspect it. D) Drain it.

20. Do you know the minimum amount of clear working space needed in front of an electrical panel?

A) 30 inches B) 36 inches C) 40 inches D) 48 inches

21. There are three shock approach boundaries; do you know what they are?

A) 1st, 2nd, and 3rd
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22. What's the point of grounding?

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23. Can you name the correct classification of an electrical fire?

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25. Which of these would likely be a lethal current?

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Value Added Course

"Electrical safety & maintenance"

ANSWER KEY

1	E	6	B	11	B	16	B	21	D
2	A	7	D	12	A	17	A	22	A
3	D	8	B	13	A	18	C	23	A
4	D	9	A	14	D	19	D	24	B
5	A	10	C	15	B	20	A	25	D

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VAC Coordinator

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Name of the Student: C. pormalagu **Year/Sem:** IV/VIII

AU Register Number: 811219105005

21/25

Value Added Course

"Electrical safety & maintenance"

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Name of the Student: S. SANGILI **Year/Sem:** II/IV

AU Register Number: 811221105027

22/25

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Name of the Student: Naveen. R **Year/Sem:** III/VI

AU Register Number: 81122105024

22/25

Value Added Course

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C) It's for wet weather work only. D) it's for industrial electrical work.

17. **What should you assume about every electrical device when you first start work?**

A) It's live. B) Its malfunctioning. C) It has a short. D) it's wired incorrectly.

18. **Why is it a good idea to only work with one hand whenever possible?**

A) Allows for greater accuracy B) Easier to work in confined spaces
C) Reduces shock risk D) it's not a good idea.

19. What do you need to do with a capacitor before working near one?

A) Remove it. B) Ground it. C) Inspect it. D) Drain it.

20. Do you know the minimum amount of clear working space needed in front of an electrical panel?

A) 30 inches B) 36 inches C) 40 inches D) 48 inches

21. There are three shock approach boundaries; do you know what they are?

A) 1st, 2nd, and 3rd
B) Main, Secondary, Tertiary.
C) Green, Yellow and Red.
D) Limited, Restricted and Prohibited

22. What's the point of grounding?

A) To provide an alternate path for electricity to get to the ground.
B) To close a circuit
C) To break a circuit
D) To lower the voltage

23. Can you name the correct classification of an electrical fire?

A) Class E B) Class C C) Class K D) Class A

24. What shouldn't be stored near electrical panels?

A) Wood B) Combustible liquids C) PVC pipe D) Magnets

25. Which of these would likely be a lethal current?

A) 40 milliamperes
B) 175 milliamperes
C) 600 milliamperes
D) 10,000 milliamperes

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Department of Electrical and Electronics Engineering

Academic Year 2022-2023 – Even Semester

VALUE ADDED COURSE ASSESMENT SHEET

"Electrical safety & maintenance"

Dr. G. Balakrishnan, M.E., Ph.D.,
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S.NO	Register Number	Name	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK (100)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	(50% of A + 50% of B)
1	811219105002	M.BARATH	IV/EEE	30	100	20	80	90
2	811219105003	A.MANIKANDAN	IV/EEE	27	90	21	84	87
3	811219105005	C.PONNALAGU	IV/EEE	30	100	21	84	92
4	811219105006	A.SALAMON	IV/EEE	27	90	20	80	85
5	811219105007	M.SARAVANAKUMAR	IV/EEE	30	100	21	84	92
6	811219105008	K.SOLAIMATHI	IV/EEE	30	100	22	88	94
7	813919105001	P.DHEVENTHIRAN	IV/EEE	30	100	20	80	90
8	811219105301	A. VENKATRAMAN	IV/EEE	27	90	21	84	87
9	811220105001	ABINESH T	III/EEE	27	90	19	76	83
10	811220105002	ALEX IMMANVEL S	III/EEE	27	90	19	76	83

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				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	(50% of A + 50% of B)
11	811220105006	BALAMURUGAN A	III/EEE	30	100	21	84	92
12	811220105011	DIVYA B	III/EEE	27	90	20	80	85
13	811220105013	GAYATHRI M	III/EEE	30	100	21	84	92
14	811220105017	KARTHIK D	III/EEE	30	100	22	88	94
15	811220105019	LATCHIYA K	III/EEE	27	90	19	76	83
16	811220105022	MANIKANDAN K	III/EEE	24	80	20	80	80
17	811220105023	MOHANDOSS S	III/EEE	24	80	21	84	82
18	811220105024	NAVEEN R	III/EEE	27	90	22	88	89
19	811220105031	SANDURU K	III/EEE	30	100	20	80	90
20	811220105032	SANTHIYA A	III/EEE	27	90	21	84	87
21	811220105035	SHANMUGAM S	III/EEE	24	80	20	80	80
22	811220105037	SNEKA T	III/EEE	27	90	21	84	87
23	811220105038	SOPHIYA K	III/EEE	30	100	20	80	90
24	811220105301	AARTHI S	III/EEE	30	100	20	80	90
25	811220105303	THIRUNAVUKARASU M	III/EEE	30	100	20	80	90

S.NO	Register Number	Name	YEAR/ BRANCH	Attendance Details		VAC-MCQ TEST		OVERALL MARK (100)
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	(50% of A + 50% of B)
26	811220105305	VENKATESHWARAN.A	III/EEE	30	100	21	84	92
27	811220105306	DIVYA BHARATHI	III/EEE	27	90	21	84	87
28	811220105307	SATHEESH KUMAR	III/EEE	30	100	22	88	94
29	811221105012	HARIHARAN E	II/EEE	27	90	20	80	85
30	811221105018	LINGESWARAN R	II/EEE	27	90	21	84	87
31	811221105027	SANGILI S	II/EEE	30	100	22	88	94
32	811221105039	SRIKANTH M	II/EEE	27	90	20	80	85

VAC Coordinator

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HoD/EEE

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REPORT ON VALUE ADDED COURSE

Title:	**" Electrical safety & maintenance "**
Resource Person:	Mr.S.Sathiyan, Trainer, NoviTech R&D Pvt Ltd, Coimbatore, Tamilnadu.

Date of conduct from :	01.08.2023	To:	05.08.2023	Duration:	**30 Hours**
Organized Department :	**Electrical and Electronics Engineering**				
Participant Year:	**2,3,4**			No. of Students Registered :	**32**
Venue:	EEE III yr Classroom				

Outcome of Value Added Course (VAC): At the end of the Course, Students can able to

- Learn electricity in the workplace.
- Learn the associated hazards and risks.
- Analyze the Standards and regulations.
- Find Qualified and unqualified worker.
- Find Effects of electricity on human body.
- Appreciate the need to isolate equipment and the techniques of safe isolation

Assessment Process

- Students, who are securing **more than 70% on total score** and secured more than 75% 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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Sample Photo of VALUE ADDED COURSE

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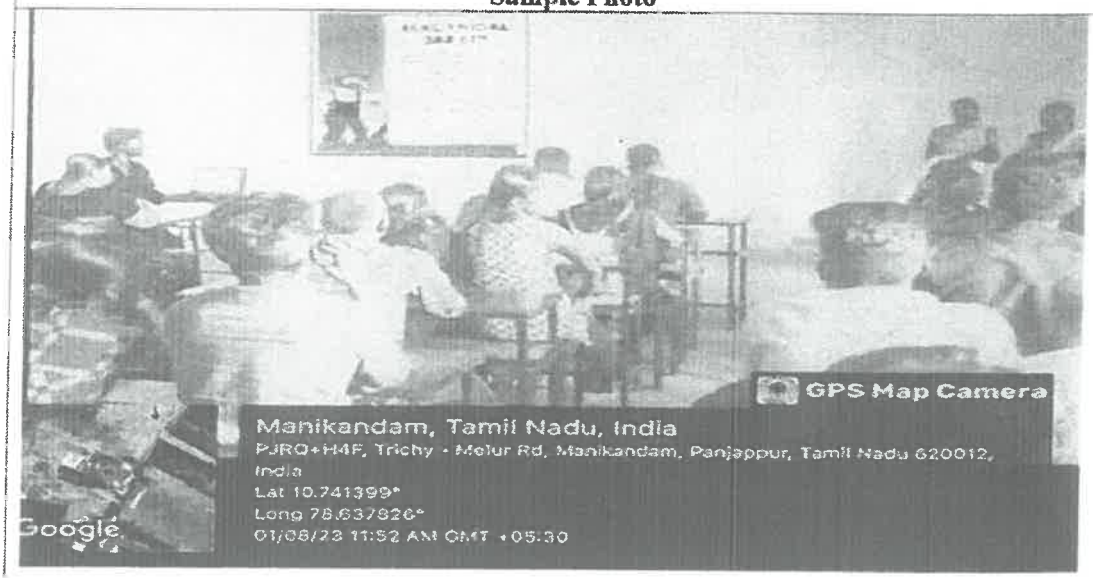
Sample Photo



VAC Coordinator **HoD/EEE** **Principal**

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CERTIFICATE OF PARTICIPATION

This is to certify that Mr.M.BARATH, IV Year, EEE has successfully completed the Value Added Course on **"Electrical safety & maintenance"** organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with NoviTech R&D Pvt Ltd from 1st August 2023 to 5th August 2023 (5days) during the Academic year 2022-2023.

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Mr.N.Anand
Manager.

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This is to certify that MS.GAYATHRI M, III Year, EEE has successfully completed the Value Added Course on **"Electrical safety & maintenance"** organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with NoviTech R&D Pvt Ltd from 1st August 2023 to 5th August 2023 (5days) during the Academic year 2022-2023.

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CERTIFICATE OF PARTICIPATION

This is to certify that Mr. LINGESWARAN R, II Year, EEE has successfully completed the Value Added Course on **"Electrical safety & maintenance"** organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with NoviTech R&D Pvt Ltd from 1st August 2023 to 5th August 2023 (5days) during the Academic year 2022-2023.

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Mr.N.Anand
Manager.

Principal
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