

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

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# **NAAC DOCUMENTS**



Quality Indicator Frame Work

# Criterion – 2

## **Teaching-Learning and Evaluation**

Submitted by

# IQAC Internal Quality Assurance Cell

Sri Bharathi Engineering College for Women



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

Criteria 2

**Teaching-Learning and Evaluation** 

350

## **Key Indicator- 2.3. Teaching- Learning Process (40)**

# 2019-2020

# ELECTRICAL AND ELECTRONICS ENGINEERING

# **PROBLEM SOLVING**

Activity	Number of Students Attended	Page No.
Tutorial	8	3
Project	12	6
Mini Project	8	16
TOTAL STUDENTS ATTENDED	28	-



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Criteria 2

**Teaching-Learning and Evaluation** 

350

**Key Indicator- 2.3. Teaching- Learning Process (40)** 

# 2019-2020

# ELECTRICAL AND ELECTRONICS ENGINEERING

## **PROBLEM SOLVING**

# **TUTORIAL**



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) Kaikkuruchi, Pudukkottai, Tamilnadu – 622 303, India DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING <u>ACADEMIC YEAR 2019-2020</u>

#### **PROBLEM SOLVING METHOD**

## LIST OF STUDENTS II YEAR EEE-PROBLEM SOLVING METHOD

SL.NO	REG.NO	NAME	YEAR/SEM	LEARNING METHOD
1.	912618105001	AARTHI G	II/IV	
2.	912618105002	AASHA R	II/IV	
3.	912618105003	AGARI S	II/IV	PROBLEM
4.	912618105004	JEEVITHA R	II/IV	SOLVING METHOD-
5.	912618105005	NISHA K	II/IV	TUTORIAL EE8401-
6.	912618105006	RAMANA R	II/IV	ELECTRICAL MACHINES-II
7.	912618105007	SNEHA S	II/IV	MACHINES-II
8.	912618105301	VINOTHINI V	II/IV	

A. Brinnese Name and signature of the Faculty Incharge

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.



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## **Tutorial Answer Sheet**

Name of the Student: K. Nisha

AU Register Number: 912618105065

Tutorial – 02		Date of Issue: 06.01.20 Mark				
Course code	EE8401	<b>Course Title</b>	le Electrical Machines - II			
Year	Π	Semester	IV	Date of Submission:		1.20

Q.No	o Questions			
1	<ul><li>(a) Define armature reaction and explain the effect of armature reaction on different power factor loads of synchronous generators.</li><li>(b) Derive the EMF equation of a 3-phase synchronous machine.</li></ul>	C210.1		
2	Describe how the direct and quadrature-axis reactances of a salient-pole synchronous generator and describe the features of synchronous impedance.	C210.1		
3	<ul> <li>(a) Explain phasor diagram of one phase of a synchronous generator and describe the features of synchronous impedence.</li> <li>(b) A 3-phase,50 Hz, star-connected alternator with 2-layer winding is running at 600 rpm. It has 12turns/coil, 4 slots/pole/phase and a coil-pitch of 10 slots.lf flux/pole is 0.035 Wb sinusoidally distributed, find the phase and line emf's induced. Assume that the total turns/phas are series connected.</li> </ul>			

#### **Mark Allocation**

Rubrics	Marks Allocated	Marks obtained
Problem solving approach	6	5
Correctness of Answer	2	2
Timely submission	2	2
Total marks	10	9

A. Bunocose Name and Signature of the Faculty Incharge

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

HOD COLLEGE FOR WOMEN KAHKKURICHI. PUDUKKOTTAI - 622 203.



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Criteria 2

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## **Key Indicator- 2.3. Teaching- Learning Process (40)**

## 2019-2020

# ELECTRICAL AND ELECTRONICS ENGINEERING

## **PROBLEM SOLVING**

# PROJECT



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

#### LIST OF STUDENTS-IV YEAR EEE- PROBLEM SOLVING METHOD

#### ACADEMIC YEAR 2019-2020

BATCH NO	REG NO	NAME	PROJECT TITLE	PROJECT SUPERVISOR	
	912616105001	ABIRAMI M	NEW CASCADED		
I	912616105002	AJITHA R	MULTILEVEL INVERTER TOPOLOGY WITH REDUCED	MRS.R.AKILANDESWAR	
	912616105004	GIRIJA V	SWITCH COUNT		
	912616105003	JOTHIKA A	SOLAR POWERED		
П	912616105006	SURIYAKALA R	MOBILE CHARGER	MRS.A.PRIMROSE	
	912616105007	MAHESWARI R			
	912616105001 KARUNAMBIGAL A WEATHER RELATED				
Ш	912616105002	SARANYA G	POWER OUTAGES AND POWER SYSTEM	MS.R.RAGADHARSINI	
	912616105004	PRINCY ROSELIN I	RESILIENCY		
	912616105003	PRASANNA K	- IOT BASED SOLAR		
IV	912616105006	SNEHA V	TRACKING SYSTEM	MR.J.SATHYARAJ	
	912616105007	SUBHASRI T			

PROJEC' COORDINATOR HoD/EËE PRINCIPAL HOD EEE PRINCIPAL SRI BHARATHI ENGINEERINGSRI BHARATHI ENGINEERII COLLEGE FOR WOMEN **COLLEGE FOR WOMEN** Dr. S.THILAGAVATHI M.E., Ph.D., KAIKKURICHI. PRINCIPAL KAIKKURICHI - 622 303. PUDUKKOTTAI - 622 303. **SRI BHARATHI ENGINEERING** PUDUKKOTTAI DISTRICT **COLLEGE FOR WOMEN** Kaikkurchi - 622 303, Pudukkottai Dt.



## NEW CASCADED MULTILEVEL INVERTER TOPOLOGY WITH REDUCED SWITCH COUNT



A PROJECT REPORT Submitted by

ABIRAMI M AJITHA R GIRIJA V Reg. No (912616105001) Reg. No (912616105002) Reg. No (912616105003)

In partial fulfillment for the award of the degree

0f

#### BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURUCHI, PUDUKOTTAI-622303 ANNA UNIVERSITY: CHENNAI 600025

APRIL 2020

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

Certified that this project report "NEW CASCADED MULTILEVEL INVERTER TOPOLOGY WITH REDUCED SWITCH COUNT "is the bonafide work of ABIRAMI M (912616105001), AJITHA R (912616105002), and GIRIJA V (912616105003) who carried out the project work under my supervision.

#### SIGNATURE

Mrs.S.SUSILA DEVI M.E., HEAD OF THE DEPARTMENT, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303.

#### SIGNATURE

Mrs.R.AKILANDESWARI M.E., SUPERVISOR / Asst Professor, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303.

Submitted for the project work and viva -voce held on .....

**INTERNAL EXAMINER\*** 

**EXTERNAL EXAMINER\*** 

\*Due to COVID-19 pandemic situations the viva-voce was conducted through Online Mode.

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



### SOLAR POWERED MOBILE CHARGER



A PROJECT REPORT Submitted by

JOTHIKA A SURIYAKALA R MAHESWARI R Reg. No (912616105006) Reg. No (912616105013) Reg. No (912616105301)

In partial fulfillment for the award of the degree

Of

#### BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURUCHI, PUDUKOTTAI-622303 ANNA UNIVERSITY: CHENNAI 600025 APRIL 2020

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

Certified that this project report "SOLAR POWERED MOBILE CHARGER "is the bonafide work of JOTHIKA A (912616105006), SURIYAKALA R (912616105013) and MAHESWARI R (912616105301) who carried out the project work under my supervision.

#### SIGNATURE

Mrs.S.SUSILA DEVI M.E., HEAD OF THE DEPARTMENT, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303,

#### SIGNATURE

Mrs.A.PRIMROSE M.E., SUPERVISOR / Asst Professor, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303. >

Submitted for the project work and viva -voce held on .....

#### INTERNAL EXAMINER\*

EXTERNAL EXAMINER\*

\*Due to COVID-19 pandemic situations the viva-voce was conducted through Online Mode.

Dr. S:THILAGAVATHI M.E., Ph.D., PRINCIPAL SRI BHARATHI ENCLUTERING COLLEGE FOR MANNEN Kaikkurchi - 322 300, Pudukkottai Dt.



### WEATHER RELATED POWER OUTAGES AND POWER SYSTEM RESILIENCY



A PROJECT REPORT Submitted by

KARUNAMBIGAL A SARANYA G PRINCY ROSELIN I Reg. No (912616105007) Reg. No (912616105009) Reg. No (912616105302)

In partial fulfillment for the award of the degree

of

#### BACHELOR OF ENGINEERING

in

### ELECTRICAL AND ELECTRONICS ENGINEERING

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURUCHI, PUDUKOTTAI-622303 ANNA UNIVERSITY: CHENNAI 600925

APRIL 2020

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

Certified that this project report "WEATHER RELATED POWER OUTAGES AND POWER SYSTEM RESILIENCY "is the bonafide work of KARUNAMBIGAL A (912616105007),

SARANYA (912616105009) and PRINCY ROSELIN (912616105302) who carried out the project work under my supervision.

#### SIGNATURE

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#### SIGNATURE

Ms. R.RAGADHARSINI M.E., SUPERVISOR / Asst Professor, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303.

Submitted for the project work and viva -voce held on .....

#### INTERNAL EXAMINER\*

### EXTERNAL EXAMINER\*

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



## IOT BASED SOLAR TRACKING SYSTEM



A PROJECT REPORT Submitted by

PRASANNA K SNEHA V SUBHASRI T

Reg. No (912616105008) Reg. No (912616105010) Reg. No (912616105011)

In partial fulfillment for the award of the degree

Of

### BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURUCHI, PUDUKOTTAI-622303 ANNA UNIVERSITY: CHENNAI 600025

**APRIL 2020** 

Dr. S.THILAGAVATHI M.E., Ph.D., PRINCIPAL SRI BHARATHI ENGINEERING COLIFORTO M

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Certified that this project report "IOT BASED SOLAR TRACKING SYSTEM "is the bonafide work of PRASANNA K (912616105008), SNEHA V (912616105010) and SUBHASRI T (912616105011) who carried out the project work under my supervision.

#### SIGNATURE

Mrs.S.SUSILA DEVI M.E., HEAD OF THE DEPARTMENT, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303.

#### SIGNATURE

Mr. J.SATHYARAJ M.E., SUPERVISOR / Asst Professor, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303.

Submitted for the project work and viva -voce held on .....

#### INTERNAL EXAMINER\*

#### EXTERNAL EXAMINER\*

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



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Criteria 2

**Teaching-Learning and Evaluation** 

350

## **Key Indicator- 2.3. Teaching- Learning Process (40)**

## 2019-2020

# ELECTRICAL AND ELECTRONICS ENGINEERING

**PROBLEM SOLVING** 

**MINI PROJECT** 



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) Kaikkuruchi, Pudukkottai, Tamilnadu – 622 303, India DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING ACADEMIC YEAR 2019-2020

### PROBLEM SOLVING METHOD

## LIST OF STUDENTS III YEAR EEE-PROBLEM SOLVING METHOD

BATCH NO	REG.NO	NAME	YEAR/ SEM	TOPIC	LEARNING METHOD
	912617105001	NAZEERA BANU I	III/VI		PROBLEM
1	912617105002	PARTHIKA S	III/VI	SPEED CONTROL OF DC	
	912617105004	SAJINA K	III/VI	MOTOR USING 4 QUADRANT CHOPPER	
	912617105005	SELSIYA R	III/VI		SOLVING METHOD-
2	912617105003	PRIYA T	III/VI		MINI PROJECT
	912617105006	THENMOZHI J	III/VI	DESIGN OF 2 QUADRANT BUCK	
	912617105007	VANITHA E	III/VI	BOOST CONVERTER USING	
	912617105302	SIYAMALADEVI S	III/VI	MICROCONTROLLER	

HOD/EEE HOD EEE SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURICHI, PUDUKKOTTAI - 622 393;

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



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

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

#### ACADEMIC YEAR 2019-2020

#### PROBLEM SOLVING METHOD

### LIST OF STUDENTS III YEAR EEE-MINI PROJECT BATCH LIST

BATCH NO	REG.NO	NAME	YEAR/ SEM	PROJECT TITLE	GUIDE NAME	
	912617105001	NAZEERA BANU I	III/VI			
1	912617105002	PARTHIKA S	III/VI	SPEED CONTROL OF DC MOTOR USING 4 QUADRANT CHOPPER	Mrs.S.Susila Devi AP/EEE	
9120	912617105004	SAJINA K	III/VI			
	912617105005	SELSIYA R	III/VI			
2	912617105003	PRIYA T	III/VI	DESIGNOF 2	Mr.J.Sathiyara	
	912617105006	THENMOZHI J	III/VI	DESIGN OF 2 QUADRANT BUCK BOOST CONVERTER		
	912617105007	VANITHA E	III/VI	USING AP/EEE MICROCONTROLLER		
	912617105302	SIYAMALADEVI S	III/VI	WICKOCONTKOLLER		

PROJECT COORDINATOR

HOD/EEE

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

PRINCIPAL

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

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



# **SPEED CONTROL OF DC MOTOR USING 4** QUADRANT CHOPPER A MINI PROJECT REPORT



Submitted by

NAZEERA BANU I PARTHIKA S SAJINA K SELSIYA R

Reg. No (912617105001) Reg. No (912617105002) Reg. No (912617105004) Reg. No (912617105005)

In partial fulfillment for the award of the degree

Of

### BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURUCHI, PUDUKOTTA1-622303 ANNA UNIVERSITY: CHENNAI 600025

**JUNE 2020** 

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

Certified that this mini project report "SPEED CONTROL OF DC MOTOR USING 4 QUADRANT CHOPPER " is the bonafide work of NAZEERA BANU I (912617105001), PARTHIKA S (912617105002), SAJINA K (912617105004), SELSIYA R (912617105005) who carried out the mini project work under my supervision.

#### SIGNATURE

Mrs.S.SUSILA DEVI M.E., HEAD OF THE DEPARTMENT, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303.

#### SIGNATURE

Mrs.S.SUSILA DEVI M.E., SUPERVISOR / HOD, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303.

Submitted for the mini project work and viva -voice held on .....

#### INTERNAL EXAMINER\*

## EXTERNAL EXAMINER\*

\*Due to COVID-19 pandemic situations the viva-voce was conducted through Online Mode.

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

PRINCIPAL SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN Kaikkurchi - 622 303, Pudukkottai Dt.



# DESIGN OF 2 QUADRANT BUCK BOOST CONVERTER USING MICROCONTROLLER



A MINI PROJECT REPORT Submitted by

PRIYA T THENMOZHI J VANITHA E SIYAMALADEVI S

Reg. No (912617105003) Reg. No (912617105006) Reg. No (912617105007) Reg. No (912617105302)

In partial fulfillment for the award of the degree

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### **BACHELOR OF ENGINEERING**

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ELECTRICAL AND ELECTRONICS ENGINEERING

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURUCHI, PUDUKOTTAI-622303 ANNA UNIVERSITY: CHENNAI 600025

**JUNE 2020** 

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

Certified that this mini project report "DESIGN OF 2 QUADRANT BUCK BOOST CONVERTER USING MICROCONTROLLER "is the bonafide work of PRIYA T (912617105003), THENMOZHI J (912617105006), VANITHA E (912617105007), SIYAMALADEVI S (912617105302) who carried out the mini project work under my supervision.

#### SIGNATURE

Mrs.S.SUSILA DEVI M.E., HEAD OF THE DEPARTMENT, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303.

#### SIGNATURE

Mr.J.SATHIYARAJ M.E., SUPERVISOR / Asst Professor, Dept of EEE, Sri Bharathi Engineering College For Women, Kaikuruchi, Pudukkottai-622303.

Submitted for the mini project work and viva -voce held on .....

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