

A
PROJECT REPORT

On

**“DESIGN AND ANALYSIS OF A WIRELESS POWER
TRANSFER SYSTEM WITH ALIGNMENT ERRORS FOR
ELECTRICAL VEHICLE APPLICATION”**

Submitted in the partial fulfilment of the requirement for the
VIII Semester, Project-10EEP85 for the award of degree of

Bachelor of Engineering

In

**Electrical & Electronics Engineering
Visvesvaraya Technological University, Belagavi**

By

**ANJALI. P.S
(1GV14EE003)**

**JIGYASA CHAND
(1GV14EE008)**

**KIRTHIGA. G
(1GV14EE011)**

Under the Guidance of

Mr. Somashekar. B M.Tech

Asst.Prof., Dept. of Electrical and Electronics Engg.

Dr.TTIT, KGF



2017-2018

Dr. T. THIMMAIAH INSTITUTE OF TECHNOLOGY.

(Formerly Golden Valley Institute of Technology)

Department of Electrical & Electronics Engineering

Oorgaum, Kolar Gold Fields – 563120

Dr.T.THIMMAIAH INSTITUTE OF TECHNOLOGY



(Formerly Golden Valley Institute of Technology)

Oorgaum, Kolar Gold Fields – 563120

DEPARTMENT OF ELECTRICAL & ELECTRONICSENGINEERING

CERTIFICATE

This is to certify that the Project work entitled

“DESIGN AND ANALYSIS OF A WIRELESS POWER TRANSFER SYSTEM
WITH ALIGNMENT ERRORS FOR ELECTRICAL VEHICLE APPLICATION”

Is a bonafide work carried out by

ANJALI. P.S
(1GV14EE003)

JIGYASA CHAND
(1GV14EE008)

KIRTHIGA. G
(1GV14EE011)

The students of 8th Semester B.E Electrical & Electronics, under our supervision and guidance submitted in the partial fulfilment of the requirement for the award of degree of Bachelor of Engineering in Electrical & Electronics Engineering of Visvesvaraya Technological University Belagavi, during the academic year 2017-18.

B. Somashekar
14/6/18

N. Lakshmi
14/6/18

Syed Ariff
14-6-18

Signature of Guide

Signature of HOD

Signature of Principal

Mr. Somashekar. B

Dr. N. Lakshmi

Dr. Syed Ariff

Head of the Department

PRINCIPAL

Dept. of Electrical Engineering

Dr. T. Thimmaiah Institute of Technology

Dr. T. Thimmaiah Institute of Technology

Oorgaum, K.G.F. - 563 120.

Name of the Examiners

Signature with date

1. Dr. N. Lakshmi

:

N. Lakshmi
14/6/18

2. Dr. Soumya Mishra

:

Soumya Mishra
14/6/18



ISSN: 2321-8169

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Kirthiga G

In recognition of the publication of the paper entitled

**Wireless Power Transfer for Electric Vehicles Application using the
Principle of ICPT System**

Published in IJRITCC Journal, Volume 6, Issue 5, May 2018



Director

IJRITCC Board
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Oorgaum, K.G.F-563120.

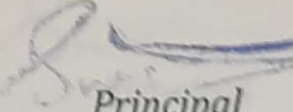
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"Recent Advancements in Electrical and Electronics Technology"
(RAEET-2018)

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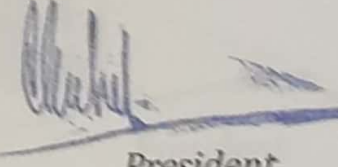
This is to certify that *Ms. KIRTHIGA G* of *Dr. T.T.I.T, K.G.F*
has presented a paper titled "*Design of WPT System & performance parameter Using
Matlab Programming for Electric Vehicle Application*"
in the national conference on "Recent Advancements in Electrical and Electronics Technology"
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.


Convenor

Dr. N. Lakshmipathy


Principal

Dr. Syed Ariff


President

Dr. T. Venkat Vardhan



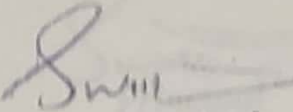
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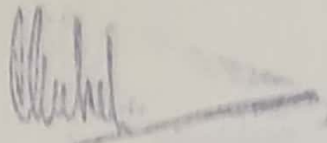
3rd National conference on
"Recent Advancements in Electrical and Electronics Technology"
(RAEET-2018)

Certificate

This is to certify that Ms. Jigyasa chand of Dr. TTIT, KGF
has presented a paper titled Implementation of WPT using Inductive
magnetic Resonance principle
in the national conference on "Recent Advancements in Electrical and Electronics Technology"
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.


Convenor
Dr. N. Lakshmi Pathy


Principal
Dr. Syed Ariff


President
Dr. T. Venkat Vardha



Oorgaum, K.G.F-563120.

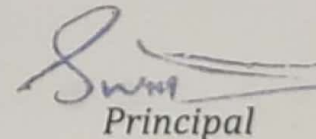
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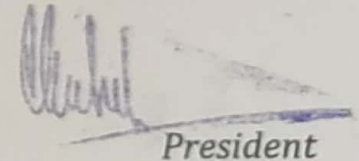
This is to certify that Ms. Anjali P.S of Dr. TTIT, KGF
has presented a paper titled "WPT for electric Vehicles Applications
Using the principle of ICPI System"
in the national conference on "Recent Advancements in Electrical and Electronics Technology"
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.


Convener

Dr. N. Lakshmipathy


Principal

Dr. Syed Ariff


President

Dr. T. Venkat Vardha

**A
Project Report
On**

**“DESIGN AND IMPLEMENTATION OF GSM
BASED 3 PHASE SUBSTATION MONITORING,
DATA STORING AND AUTOMATED CONTROL
SYSTEM”**

**Submitted in the partial fulfilment of the requirement for the VIII
Semester, Project-10EEP85 for the award of degree of**

**Bachelor of Engineering
In
Electrical & Electronics Engineering
Visvesvaraya Technological University, Belagavi**

By

**KARTHIKA I
(1GV14EE009)**

**KALAPRIYA V
(1GV13EE011)**

**MONICA S
(1GV14EE018)**

Under the Guidance of

Mr. DAVID LIVINGSTON.D. M.Tech
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Dr. TTIT, KGF.

Mrs. DHANALAKSHMI.V M.Tech
Assistant Professor
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2017-2018

Dr. T. THIMMAIAH INSTITUTE OF TECHNOLOGY.

**(Formerly Golden Valley Institute of Technology)
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Dr.T.THIMMAIAH INSTITUTE OF TECHNOLOGY



(Formerly Golden Valley Institute Of Technology) Oorgaum, Kolar Gold Fields –
563120 Department Of Electrical & Electronics Engineering.

CERTIFICATE

This is to Certify the Project work entitled

**“DESIGN AND IMPLEMENTAION OF GSM BASED 3 PHASE SUBSTATION
MONITORING, DATA STORING AND AUTOMATED CONTROL SYSTEM”**

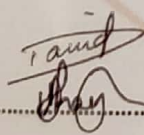
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KARTHIKA I
(1GV14EE009)

KALAPRIYA V
(1GV13EE011)

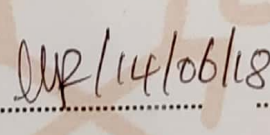
MONICA S
(1GV14EE018)

The students of 8th semester, B.E Electrical & Electronics, under our supervision and guidance submitted in the partial fulfilment of the requirements for the award of degree of Bachelor of Engineering in **Electrical & Electronics Engineering of Visvesvaraya Technological University** Belagavi, during the year 2017-18. The project report has been approved as it satisfies the academic requirement in respect of project 10EEP85 prescribed for the Bachelor of Engineering Degree.


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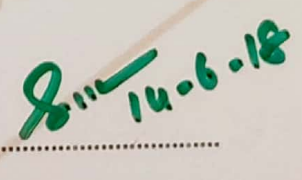
Signature of Guides:

(Mr. DAVID
LIVINGSTON D &
Mrs. DHANALAKSHMI V)


.....

Signature of HOD

(Dr. Lakshmi'pathy N)


.....

Signature of Principal

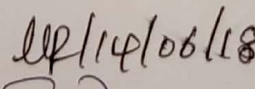
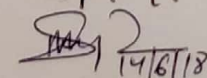
(Dr. Syed Ariff)

PRINCIPAL

Dr. T. Thimmaiah Institute of Technology
Oorgaum, K.G.F. - 563 120.

Name of the Examiners

Signature with date

1. Dr. N. Lakshmi'pathy :  14/6/18
2. Dr. Soanya Mishra :  14/6/18

ABSTRACT

In this fast-emerging world approximately 2000 electricity sub-station are situated at various locations in every state. The monitoring and taking immediate remedial measures for the faults on each sub-station is the major challenge. There are as many factors to be measured and monitored to maintain a healthy substation. But it is more difficult work and also costlier to deploy a person at every sub-station. It would also lead to have error prone measurements when it is being manual.

This proposed system provides GSM based real time solution for the substation major problems. It uses voltage sensors, and current sensors, to measure voltage and current of all 3 phases of sub-station continuously and if any abnormality occurs in one or more Phases like Low voltage or high voltage or phase absent or overload the system automatically turns of the power and intimates locally by a buzzer and LCD display regarding the problem occurred, at the same time this information is also sent remotely as an SMS via GSM Modem to higher authority in charge. The system also provides the information to higher authority regarding the substation any time by just giving a missed call to it and receiving the current status by an SMS.

The proposed system also has an RTC (Real Time Clock) and a μ SD Card Reader/Writer that will record every second the parameters like Voltages, Currents and Power of all three phases and also their status. This recorded information is very useful to analyze the working, performance and efficiency of the substation by plotting graphs with the recorded values. The μ SD Card Reader/Writer can support a maximum of 8GB which can record 365days 24x7 data.

**A
Project Report
On**

**“ PRECISION AGRICULTURE MONITORING
SYSTEM USING WIRELESS SENSOR NETWORK ”**

**Submitted in the partial fulfilment of the
requirement for the VIII Semester, Project–10EEP85
For the award of degree of**

**Bachelor of Engineering
In
Electrical & Electronics Engineering
Visvesvaraya Technological University, Belagavi**

By

**KENZAR R PAUL
(1GV14EE010)**

**RAJ SURIYA M
(1GV14EE023)**

**TILAK B S
(1GV14EE031)**

**SHIVANAND B KADAGAD
(1GV14EE405)**

Under the Guidance of

**DAYANANDA B R. M.E.,
Assistant Professor
Dept. Electrical & Electronics Engg.
Dr. TTIT, KGF.**



2017–2018

Dr. T. THIMMAIAH INSTITUTE OF TECHNOLOGY.

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Dr.T.THIMMAIAH INSTITUTE OF TECHNOLOGY



(Formerly Golden Valley Institute Of Technology)
Oorgaum, Kolar Gold Fields – 563120
Department Of Electrical & Electronics Engineering.

CERTIFICATE

This is to Certify the Project work entitled

**“PRECISION AGRICULTURE MONITORING SYSTEM USING
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Is a bonafide work carried out by Carried out by

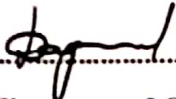
KENZAR R PAUL
(1GV14EE010)

RAJ SURIYA M
(1GV14EE023)

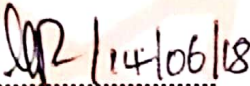
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.....13/06/18.....


Signature of Guides:
(Mr. Dayananda B R)

.....14/06/18.....

Signature of HOD
Head of the Department
(Dr. Lakshmi Pathy N)
Dep. of Electrical Engineering

Dr. T. Thimmaiah Institute of Technology

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.....14-6-18.....

Signature of Principal
(Dr. Syed Ariff)

PRINCIPAL

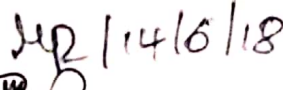
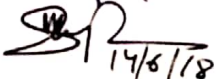
Dr. T. Thimmaiah Institute of Technology

Oorgaum, K. G. F.-563120

Signature with date

Name of the Examiners

1. Dr. N. Lakshmi Pathy
2. Dr. Soumya Mishra

: .....14/06/18.....
: .....14/6/18.....

A
Project Report
On

**“SMART GRID MONITORING AND CONTROL
SYSTEM USING IOT”**

Submitted in the partial fulfillment of the requirement for the
VIII Semester Project Work-10EEP85 for the award of degree of

Bachelor of Engineering

in

Electrical & Electronics Engineering

of

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi - 590018

By

**LOKAVI N
(1GV14EE012)**

**SUSAN J
(1GV14EE029)**

**SWETHA N
(1GV14EE030)**

Project work carried out at

Dr.T.THIMMAIAH INSTITUTE OF TECHNOLOGY, K.G.F.

Under the Guidance of

Ms. Veena B, M.E.,
Associate Professor
Dept. of E&E, Dr.T.T.I.T.

Mrs. Sridevi A, M.E.,
Assistant Professor
Dept. of E&E, Dr.T.T.I.T.



2017-18

Dr.T.THIMMAIAH INSTITUTE OF TECHNOLOGY
(Formerly Golden Valley Institute of Technology)
Department of Electrical & Electronics Engineering
Kolar Gold Fields – 563120.

Dr.T.THIMMAIAH INSTITUTE OF TECHNOLOGY



(Formerly Golden Valley Institute of Technology)
Oorgaam, Kolar Gold Fields – 563120

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING.

CERTIFICATE

This is to certify that the project work entitled

“SMART GRID MONITORING & CONTROL SYTEM USING INTERNET OF THINGS (IoT)”

Is a bonafide work carried out

by

LOKAVI N
(1GV14EE012)

SWETHA N
(1GV14EE030)

SUSAN J
(1GV14EE029)

The students of 8th semester B.E. Electrical & Electronics Engineering under our supervision and guidance submitted in partial fulfilment for the award of degree of Bachelor of Engineering in Electrical & Electronics Engineering of Visvesvaraya Technological University Belagavi, during the year 2017-18.

Veena 14/6/18
.....
A. Sridevi 14/6/18
.....

Signature of Guides:

1. Ms. Veena B
2. Mrs. Sridevi A

Name of the Examiners

1. *Dr. N. Lakshmi pathy* :
2. *Dr. Soumya Michra* :

Signature of HOD

Dr. Lakshmi pathy N

Head of the Department
Dept. of Electrical Engineering
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Oorgaam, K.G.F.-563 120.

Signature of Principal

Dr. Syed Ariff

PRINCIPAL

Dr. T. Thimmaiah Institute of Technology

Oorgaam, K.G.F. - 563 120.

Signature with date

Dr. Syed Ariff 14/6/18
.....
Dr. Syed Ariff 14/6/18
.....




Oorgaam, K.G.F-563120.


3rd National conference on
"Recent Advancements in Electrical and Electronics Technology "
(RAEET-2018)

Certificate

This is to certify thatMs. SUSAN J.....ofDr. T. T. I. T., K. G. F.....
has presented a paper titled "Smart Grid Monitoring & Control System.....
using IOT"
in the national conference on "Recent Advancements in Electrical and Electronics Technology
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.


Convenor
Dr. N. Lakshmipathy


Principal
Dr. Syed Ariff


President
Dr. T. Venkat Vardhan

A
Project Report
On
**“PERFORMANCE OF PHOTODIODE FOR LONG DISTANCE
POWER TRANSFER BY USING HIGH INTENSITY LASER BEAM”**

Submitted in the partial fulfillment of the
Requirement for the VIII Semester, Project-10EEP85
For the award of degree of

Bachelor of Engineering
In
Electrical & Electronics Engineering
Visvesvaraya Technological University, Belagavi

By

1. MEGHANA K.R.
1GV14EE016

2. MOHAN KUMAR D.M.
1GV14EE017

3. RAHUL KUMAR
1GV14EE022

4. YASHASVI KAKADE
1GV14EE032

Under the Guidance of

Dr. Lakshmipathy N.
Prof &HOD, Dept. of EEE, Dr. TTIT, KGF

Mr. Abhishek Kumar Mishra
PhD. Scholar, NITK Surathkal



2017-2018

Dr. T.THIMMAIAH INSTITUTE OF TECHNOLOGY.

(Formerly Golden Valley Institute of Technology)

Department of Electrical & Electronics Engineering

Oorgaum, Kolar Gold Fields – 563120

DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY



(Formerly Golden Valley Institute of Technology)
Oorgaum, Kolar Gold Fields – 563120
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING.

CERTIFICATE

This is to certify that the Project work entitled
“PERFORMANCE OF PHOTODIODE FOR LONG DISTANCE POWER
TRANSFER BY USING HIGH INTENSITY LASER BEAM”

Is a bonafide work carried out by

1. MEGHANA K.R.
1GV14EE016

2. MOHAN KUMAR D.M.
1GV14EE017

3. RAHUL KUMAR
1GV14EE022

4. YASHASVI KAKADE
1GV14EE032

The students of 8th Semester B.E. Electrical & Electronics, under our supervision and guidance submitted in partial fulfillment of the requirements for the award of degree of Bachelor Of Engineering In Electrical & Electronics of Visvesvaraya Technological University Belagavi, during the academic year 2017-2018

.....
Signature of Guide & HOD

Signature of Guide & HOD

Dr. Lakshmipathy N.

.....
Signature of Principal

Signature of Principal

Dr. Syed Ariff

Name of the Examiners

1. Dr. N. Lakshmipathy
2. Dr. Soumya Mishra

Signature with date

.....
Signature with date
14/06/18
14/06/18



(Affiliated to V.T.U., Belgaum, Approved by AICTE, New Delhi)
Oorgaam, K.G.F-563120.


3rd National conference on
"Recent Advancements in Electrical and Electronics Technology"
(RAEET-2018)

Certificate

This is to certify that Ms. Rahul Kumar of Dr. T. T. I. T., K.G.F
has presented a paper titled "Laser diode efficiency Evaluation in
Continuous Mode for WPT"
in the national conference on "Recent Advancements in Electrical and Electronics Technology"
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.


Convenor

Dr. N. Lakshmi Pathy


Principal

Dr. Syed Ariff


President

Dr. T. Venkat Vardhan



(Affiliated to V.T.U., Belgaum, Approved by AICTE, New Delhi)
Oorgaum, K.G.F-563120.

3rd National conference on
"Recent Advancements in Electrical and Electronics Technology"
(RAEET-2018)

Certificate

This is to certify that *Mr. MOHAN KUMAR DM* of *Dr. T. T. I. T., K. G. F.*
has presented a paper titled "*Main Considerations for High Intensity Laser
Beaming*"
in the national conference on "Recent Advancements in Electrical and Electronics Technology"
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.

Lakshmi
Convenor

Dr. N. Lakshmipathy

Syed Ariff
Principal

Dr. Syed Ariff

Vardh
President

Dr. T. Venkat Vardh



(Affiliated to V.T.U., Belgaum, Approved by AICTE ,New Delhi)
Oorgaum, K.G.F-563120.

3rd National conference on
"Recent Advancements in Electrical and Electronics Technology "
(RAEET-2018)

Certificate

This is to certify that **YASHASVI KAKADE** of **Dr. T.T. I.T., K.G.F**
has presented a paper titled "**Wireless power transmission using laser at long distances**"
in the national conference on "Recent Advancements in Electrical and Electronics Technology
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.

Lakshmi
Convenor

Dr. N. Lakshmiathy

Syed Ariff

Principal

Dr. Syed Ariff

Venkat Vardhar

President

Dr. T. Venkat Vardhar

A
PROJECT REPORT
ON

"TEMPERATURE AND EFFICIENCY CONTROL OF SOLAR
PANEL USING WATER COOL TECHNOLOGY"

SUBMITTED IN THE PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE

VIII SEMESTER PROJECT -10EEP85 FOR THE AWARD OF DEGREE
Of

Bachelor of Engineering

In

Electrical & Electronics Engineering
Visvesvaraya Technological University Belgaum

By

MANJUNATHA A V
1GV14EE014

SHARATH R
1GV14EE026

N BHAVANA
1GV14EE019

LAKSHMIDEVI M N
1GV15EE401

Project Carried Out At

Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY, KGF.

Under the Guidance Of

Dr. LAKSHMIPATHY N

Prof. & HOD, Dept. of Electrical and Electronics Engineering

Dr. TTIT, Oorguam KGF



2017-2018

Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY

(FORMERLY GOLDEN VALLEY INSTITUTE OF TECHNOLOGY)

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

KOLAR GOLD FIELD 563 120.



(Formerly Golden Valley Institute of Technology)

Oorgaum, Kolar Gold Fields – 563120

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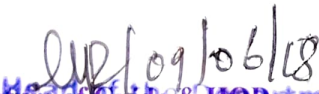
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SHARATH R
1GV14EE026

N BHAVANA
1GV14EE019

LAKSHMIDEVI M N
1GV15EE401

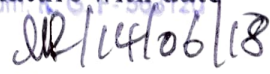
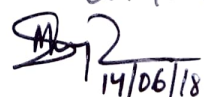
The students of 8th semester, B.E Electrical & Electronics, under our supervision and guidance submitted in the partial fulfilment of the requirements for the award of degree of Bachelor of Engineering in **Electrical & Electronics Engineering of Visvesvaraya Technological University** Belagavi, during the year 2017-18. The project report has been approved as it satisfies the academic requirement in respect of project 10EEP85 prescribed for the Bachelor of Engineering Degree.


Signature of Guide & HOD
Dept. of Electrical Engineering
Dr. Lakshmi Pathy
Dr. T. Thimmaiah Institute of Technology,
Oorgaum, K.G.F.-563 120.


Signature of Principal
Dr. Syed Ariff
PRINCIPAL
Dr. T. Thimmaiah Institute of Technology
Oorgaum, K.G.F.-563 120.

Names of the Examiners.

1. **Dr. N. Lakshmi Pathy** :
2. **Dr. Soumya Mishra** :


Signature with date

14/06/18



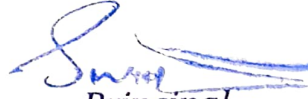
Dr. T. Thimmaiah Institute of Technology
(Affiliated to V.T.U., Belgaum, Approved by AICTE, New Delhi)
Oorgaum, K.G.F-563120.

3rd National conference on
"Recent Advancements in Electrical and Electronics Technology "
(RAEET-2018)

Certificate

This is to certify that **Ms. SHARATH R.** of **Dr. T. T. I. T., K. G. F.**
has presented a paper titled "**Temperature effect on Solar panel performance**"
in the national conference on "Recent Advancements in Electrical and Electronics Technology
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.


Convenor
Dr. N. Lakshmi pathy


Principal
Dr. Syed Ariff


President
Dr. T. Venkat Vardha



(Affiliated to V.I.O., Beigam, Approved by MCIET, New Delhi,
Oorgaum, K.G.F-563120.

3rd National conference on
"Recent Advancements in Electrical and Electronics Technology "
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Certificate

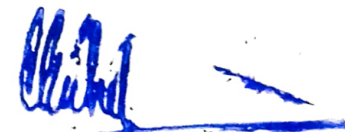
This is to certify that MANJUNATHA. A. V of Dr. T. T. I. T, K.G.F.
has presented a paper titled "Solar panel water cooling to enhance panel power output
in the national conference on "Recent Advancements in Electrical and Electronics Technology
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.


Convenor

Dr. N. Lakshmipathy


Principal

Dr. Syed Ariff


President

Dr. T. Venkat Vardha



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"Recent Advancements in Electrical and Electronics Technology "
(RAEET-2018)

Certificate

This is to certify that *Ms. N. BHAVANA* of *Dr. T. T. I. T., K. G. F.*
has presented a paper titled "*Factors affecting Solar Cell Efficiency*"
in the national conference on "Recent Advancements in Electrical and Electronics Technology
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.

Lakshmi
Convenor

Dr. N. Lakshmipathy

Ariff
Principal

Dr. Syed Ariff

Vard
President

Dr. T. Venkat Vard



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This is to certify that **LAKSHMI DEVI. M. N** of **Dr. T. T. I. T, K.G.F**
has presented a paper titled "**Solar panel water cooling to enhance panel power output**"
in the national conference on "Recent Advancements in Electrical and Electronics Technology
"(RAEET-2018), organized by Department of Electrical and Electronics Engineering,
Dr. T. Thimmaiah Institute of Technology on 21st May 2018.


Convenor

Dr. N. Lakshmi Pathy


Principal

Dr. Syed Ariff


President

Dr. L. Venkat Varma