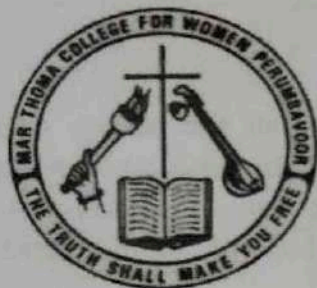


**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



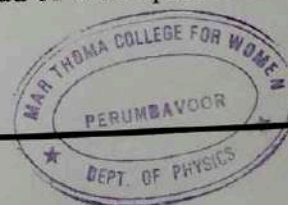
CERTIFICATE

This is to certify that the project report entitled "**Synthesis of Iron Oxide Nano particles using coir fibre extracts**" is the bonafide work carried out by Ms. Anjima D. under my guidance and supervision, as part of the curriculum of Integrated Programme in Basic Science Physics under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide

DR. MARY VARGHESE
Principal in-charge
Mar Thoma College For Women
Perumbavoor - 683 542

Head of the Department

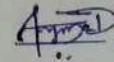


DECLARATION

I, Anjima D., do hereby declare that this project report entitled "**Synthesis of Iron Oxide Nano particles using coir fibre extracts**" is a based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

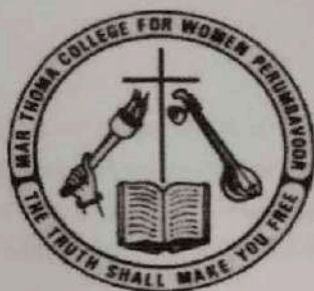
Signature:



Date: 12/4/2022

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)

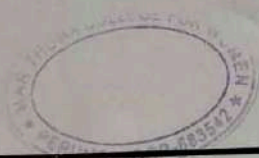


CERTIFICATE

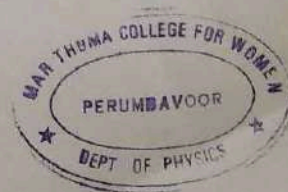
This is to certify that the project report entitled "**Synthesis of Copper Oxide Nano particles**" is the bonafide work carried out by Ms. Krishnendu K.K. under my guidance and supervision, as part of the curriculum of Integrated Programme in Basic Science Physics under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Rajani Jacob
Project Guide

(Signature)
Head of the Department




(Signature)
DR. SUCY MARY VARGHESE
Principal - in-charge
Mar Thoma College For Women
Perumbavoor - 689542



DECLARATION

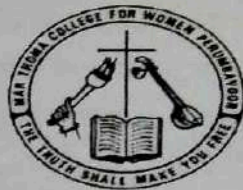
I, Krishnendu K. K., do hereby declare that this project report entitled "**Synthesis of Copper Oxide Nano particles**" is a based on the original work and carried out by me under the Guidance of **Dr. Rajani Jacob**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

Signature: 

Date: 12/04/2022

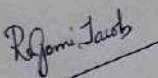
DEPARTMENT OF PHYSICS
MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR
(Affiliated to Mahatma Gandhi University)





CERTIFICATE

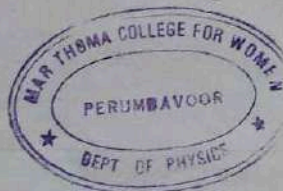
This is to certify that the project report entitled "HOME ENERGY AUDIT" is the bonafide work carried out by Ms. KHADEEJAM.H (Reg.no:190021041539) under my guidance and supervision during 2021-2022, in partial fulfillment of the requirement for the award of the Degree of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

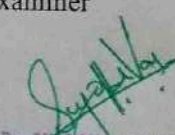
Viva Voice Examination Held on 18/05/2022.....


Project Guide


Head of the Department


External Examiner




DR. SIO MARY VARGHESE
Principal in-charge
Mar Thoma College For Women
Perumbavoor - 683 542

DECLARATION

I, KHADEEJA M.H do hereby declare that this project report entitled "HOME ENERGY AUDIT" is a based on the original work and carried out by me under TheGuidance of Dr.RajaniJacob, Department of Physics, Mar Thoma College forWomen, Perumbavoor.

KHADEEJA M.H

Khadeeja

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

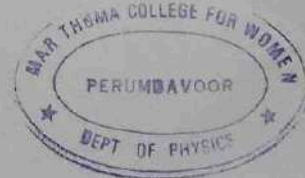
This is to certify that the project report entitled "**Experiment to find Stefan's Constant**" is the bonafide work carried out by Ms. Ramseena Shameer under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Rajini Jacob
Project Guide

CS
Head of the Department



Sujatha Varghese
DR. SUJATHA VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 542



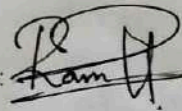
DECLARATION

I, Ramseena Shameer, do hereby declare that this project report entitled "**Experiment to find Stefan's Constant**" is based on the original work and carried out by me under the Guidance of **Dr. Rajani Jacob**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

Date: 12/4/2022

Signature:



**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

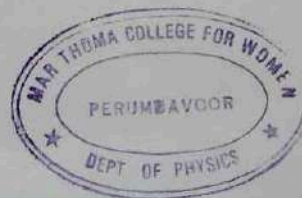
This is to certify that the project report entitled "**Synthesis Of Silver Nano Particles Using Coir Fibre Extracts**" is the bonafide work carried out by Ms. Ameena M. K. under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide

Head of the Department




DR. SUJOMARY VARGHESE
Principal in charge
Mar Thoma College For Women
Perumbavoor - 683 542



DECLARATION

I, **Ameena M. K.** do hereby declare that this project report entitled "**Synthesis Of Silver Nano Particles Using Coir Fibre Extracts**" is a based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

Signature: 

Date: 12/4/2022

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**


(Affiliated to Mahatma Gandhi University)





CERTIFICATE

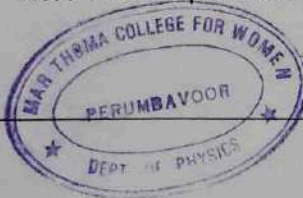
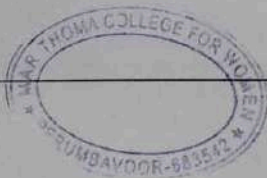
This is to certify that the project report entitled "ENERGY AUDIT – INSTITUTION 2021-22" is the bonafide work carried out by Ms. FATHIMA T.S (Reg.no:190021041537) under my guidance and supervision during 2021-2022, in partial fulfilment the requirement for the award of the Degree of Bachelor of Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

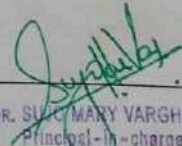
Viva Voice Examination Held on 18/05/2022.....


Project Guide


Head of the Department


External Examiner




DR. S. MARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 542

DECLARATION

I FATHIMA T.S do hereby declare that this project report entitled "ENERGY AUDIT – INSTITUTION 2021-22" is a based on the original work and carried out by me under the Guidance of Dr. Anupama P, Assistant Professor, Department Of Physics, Mar Thoma College for Women, Perumbavoor.

Date 18-5-2022
Place Perumbavoor



FATHIMA T.S

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)

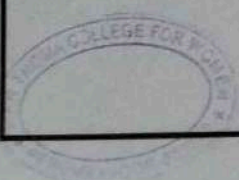


CERTIFICATE

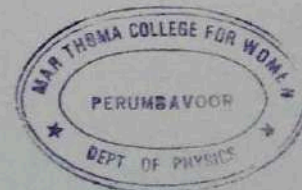
This is to certify that the project report entitled **“Wireless EV Charging Station”** is the bonafide work carried out by Ms. Shahima Shahazada under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide

Head of the Department



DR. SUJITHY VARGHESE
Principal in-charge
Mar Thoma College For Women
Perumbaroor - 689 542



DECLARATION

I, Shahima Shahazada, do hereby declare that this project report entitled "**Wireless EV Charging Station**" is based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

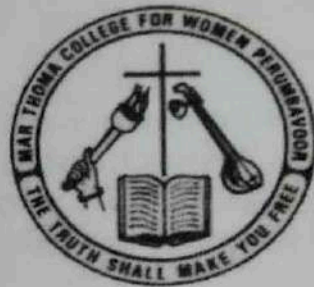
Date: 12/4/2022

Signature:

Shahi

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

This is to certify that the project report entitled **“Experiment to find Stefan's Constant”** is the bonafide work carried out by Ms. Alfiya Kareem under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Alfoni Jacob

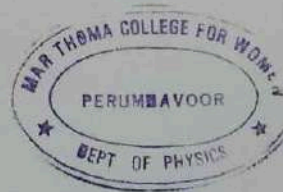
Project Guide

AD

Head of the Department



Sujatha Varghese
DR. SUJATHA VARGHESE
Principal - in-charge
Mar Thoma College For Women
Perumbavoor - 683 542



DECLARATION

I, Alfiya Kareem, do hereby declare that this project report entitled "**Experiment to find Stefan's Constant**" is based on the original work and carried out by me under the Guidance of **Dr. Rajani Jacob**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

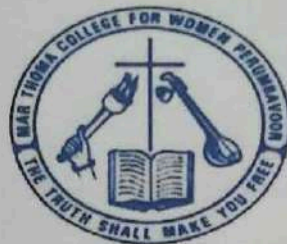
Place: Perumbavoor

Signature: *Alfiya*

Date: 12 / 4 / 2022

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

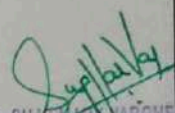
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
CERTIFICATE

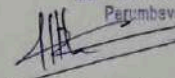
This is to certify that the project report entitled "ENERGY AUDIT – INSTITUTION 2021-22" is the bonafide work carried out by Ms. FATHIMA HAMSA (Reg.no:190021041536) under my guidance and supervision during 2021-2022, in partial fulfilment the requirement for the award of the Degree of Bachelor of Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

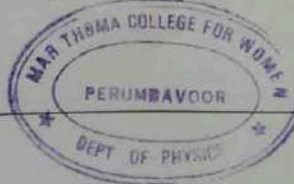
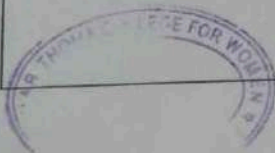
Viva Voice Examination Held on 18/05/2022


Dr. SUDHAKAR VARONER
Principal-in-charge
Mar Thoma College For Women
Perumbevoor - 683 542


Project Guide


Head of the Department


External Examiner



DECLARATION

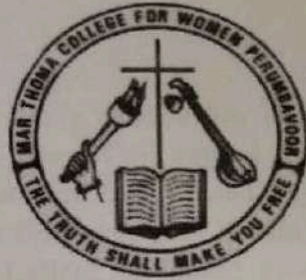
I FATHIMA HAMSA do hereby declare that this project report entitled "**ENERGY AUDIT – INSTITUTION 2021-22**" is based on the original work and carried out by me under the Guidance of Dr. Anupama P, Assistant Professor, Department Of Physics, Mar Thoma College for Women, Perumbavoor.

Date 18/5/22
Place perumbavoor


FATHIMA HAMSA

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

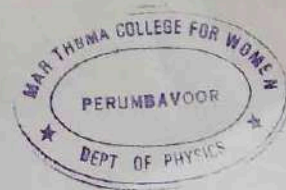
This is to certify that the project report entitled "**Determination of the Mass of the Jupiter from the Orbital data of its Moons using Stellarium**" is the bonafide work carried out by Ms. Nithuna Rajan. under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Rajani Jacob
Project Guide

CS
Head of the Department



S. Mary Varghese
DR. S. MARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbaroor - 689 542



DECLARATION

I, **Nithuna Rajan**, do hereby declare that this project report entitled "**Determination of the Mass of the Jupiter from the Orbital data of its Moons using Stellarium** " is a based on the original work and carried out by me under the Guidance of **Dr. Rajani Jacob**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

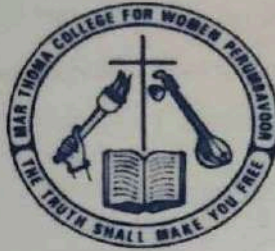
Place: Perumbavoor

Signature: *Nithuna*

Date: *18.05.2022*

MAR THOMA COLLEGE FOR WOMEN PERUMBAVOOR

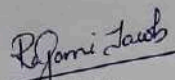
(Affiliated to Mahatma Gandhi University)




CERTIFICATE

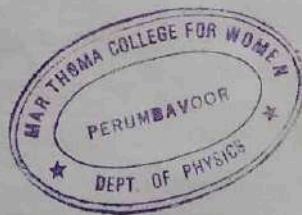
This is to certify that the project report entitled "HOME ENERGY AUDIT" is the bonafide work carried out by Ms. SURYA M.C (Reg.no:190021041541) Under my guidance and supervision during 2021-2022, in partial fulfilment the requirement for the award of the Degree of Bachelor of Science (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

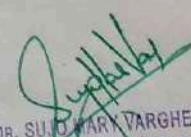
Viva Voice Examination Held on ...18/05/2022.....


Project Guide


Head of the Department


External Examiner





DR. SUJOMY VARGHESE
Principal-In-charge
Mar Thoma College For Women
Perumbavoor - 683 542

DECLARATION

I Surya me do hereby declare that this project report entitled "HOME ENERGY AUDIT" is a based on the original work and carried out by me under the Guidance of Dr. Rajani Jacob Department of Physics, Mar Thoma College for Women, Perumbavoor.

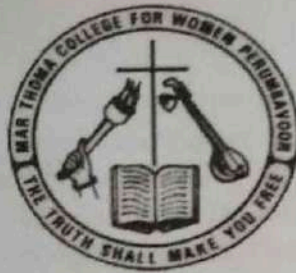
Date : 18/5/22

Place : perumbavoor


SURYA M.C

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



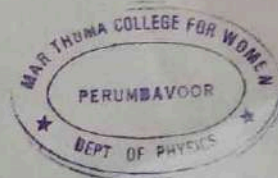
CERTIFICATE

This is to certify that the project report entitled "**Determination of the Mass of the Jupiter from the Orbital data of its Moons using Stellarium**" is the bonafide work carried out by Ms. Daya Das P. K. under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Rejani Jacob
Project Guide

CS
Head of the Department

S. Mary Varghese
DR. S. MARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 842



DECLARATION

I, **Daya Das P. K.**, do hereby declare that this project report entitled "**Determination of the Mass of the Jupiter from the Orbital data of its Moons using Stellarium** " is a based on the original work and carried out by me under the Guidance of **Dr. Rajani Jacob**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

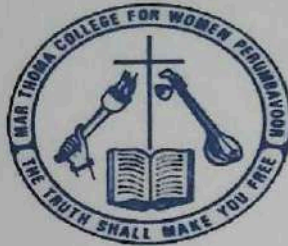
Date: 12.06.2022



Signature:

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

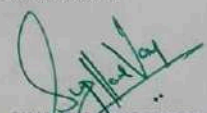
(Affiliated to Mahatma Gandhi University)



CERTIFICATE

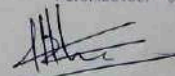
This is to certify that the project report entitled "**ENERGY AUDIT – INSTITUTION 2021-22**" is the bonafide work carried out by Ms. AKHINA K SUDHEESH (Reg.no:190021041534) under my guidance and supervision during 2021-2022, in partial fulfilment the requirement for the award of the Degree of Bachelor of Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

Viva Voice Examination Held on 18/05/2022


DR. SUJO MARY VARGHESE
Principal in-charge
Mar Thoma College For Women
Perumbavoor - 683 542


Project Guide


Head of the Department


External Examiner



DECLARATION

I, AKHINA K SUDHEESH do hereby declare that this project report entitled "ENERGY AUDIT – INSTITUTION 2021-22" is based on the original work and carried out by me under the Guidance of Dr. Anupama P, Assistant Professor, Department Of Physics, Mar Thoma College for Women, Perumbavoor.

Date 18-5-2022
Place Perumbavoor



AKHINA K SUDHEESH

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**


(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



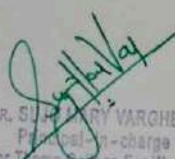
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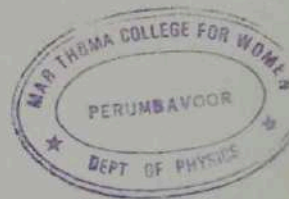
This is to certify that the project report entitled **“Wireless EV Charging Station”** is the bonafide work carried out by Ms. Syamini Sasi under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.


Project Guide


Head of the Department




DR. SUSHRITHA VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbaroor - 603 542



DECLARATION

I, Syamini Sasi, do hereby declare that this project report entitled "**Wireless EV Charging Station**" is based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

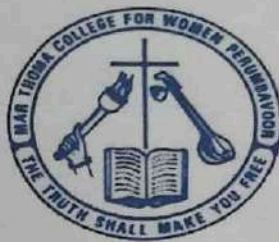
Date: 12/04/2022

Signature:



**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

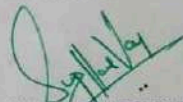
(Affiliated to Mahatma Gandhi University)





CERTIFICATE

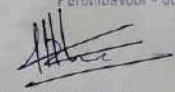
This is to certify that the project report entitled "ENERGY AUDIT – INSTITUTION 2021-22" is the bonafide work carried out by Ms. AKHINA K SUDHEESH (Reg.no:190021041534) under my guidance and supervision during 2021-2022, in partial fulfilment the requirement for the award of the Degree of Bachelor of Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

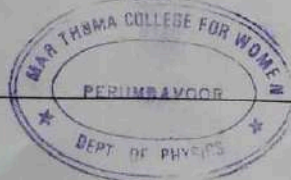
Viva Voice Examination Held on 18/05/2022


DR. SUJOMARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 542


Project Guide


Head of the Department


External Examiner



DECLARATION

I, AKHINA K SUDHEESH do hereby declare that this project report entitled "**ENERGY AUDIT – INSTITUTION 2021-22**" is based on the original work and carried out by me under the Guidance of Dr. Anupama P, Assistant Professor, Department Of Physics, Mar Thoma College for Women, Perumbavoor.

Date 18-5-2022
Place Perumbavoor



AKHINA K SUDHEESH

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



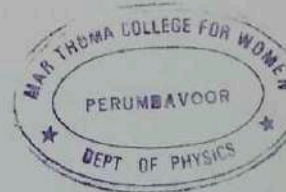
CERTIFICATE

This is to certify that the project report entitled "**CARBON FOOTPRINT ANALYSIS**" is the bonafide work carried out by Ms. Treesa Maria Stanley under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide

Head of the Department


DR. SUJOY MARY VARGHESE
Principal - in-charge
Mar Thoma College For Women
Perumbavoor - 683 542



DECLARATION

I, **Treesa Maria Stanly** do hereby declare that this project report entitled "**CARBON FOOTPRINT ANALYSIS**" is a based on the original work and carried out by me under the Guidance of **Dr. Anupama P.**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

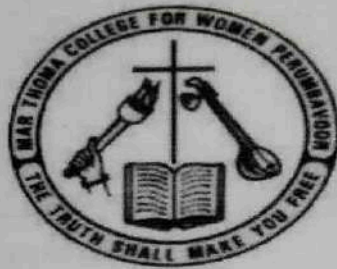
Place: Perumbavoor

Signature: 

Date: 12/04/2022

MAR THOMA COLLEGE FOR WOMEN PERUMBAVOOR

(Affiliated to Mahatma Gandhi University)



CERTIFICATE

This is to certify that the project report entitled "**HOME ENERGY AUDIT**" is the bonafide work carried out by Ms. ADHILA KS (Reg.no:190021041542) under my guidance and supervision during 2021-2022, in partial fulfilment of the requirement for the award of the Degree of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

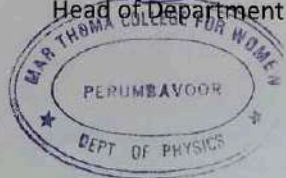
Viva Voice Examination Held on 18/05/2022

Rafoni Jacob
Project Guide

AD
Head of Department

[Signature]
External Examiner

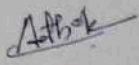
[Signature]
DR. SUJO MARY VARGHESE
Principal in-charge
Mar Thoma College For Women
Perumbavoor - 680 542



DECLARATION

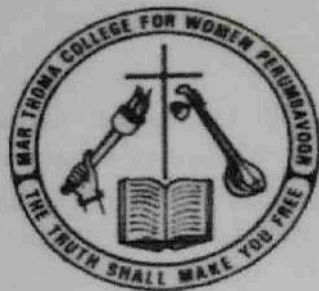
I, ADHILA KS do hereby declare that this project report entitled "HOME ENERGY AUDIT" is based on the original work and carried out by me under the Guidance of Dr. Rajani Jacob Department of Physics, Mar Thoma College for Women, Perumbavoor

Date: 18/05/2022
Place: perumbavoor


Adhila k.s

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**


(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)




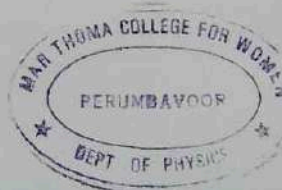
CERTIFICATE

This is to certify that the project report entitled "**Resistivity of a semiconductor using four probe analysis**" is the bonafide work carried out by Ms. Ansila Anas under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.


Project Guide


Head of the Department



DR. SUJATHA VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 693 512



DECLARATION

I, **Ansila Anas**, do hereby declare that this project report entitled "**Resistivity of a semiconductor using four probe analysis**" is based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

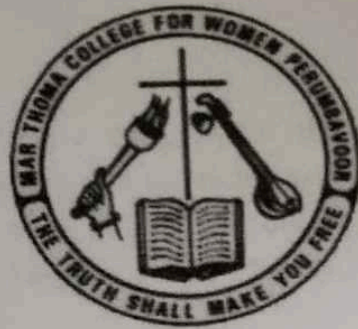
Place: Perumbavoor

Signature: 

Date: 12/04/2022


**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

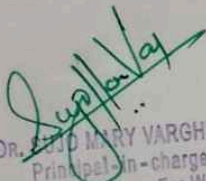
(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)




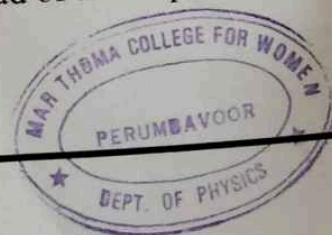
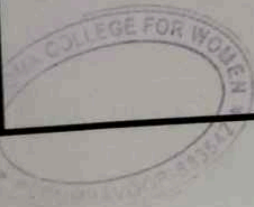
CERTIFICATE

This is to certify that the project report entitled "**Synthesis of Iron Oxide Nano particles using coir fibre extracts**" is the bonafide work carried out by Ms. Laya S Pillai under my guidance and supervision, as part of the curriculum of Integrated Programme in Basic Science Physics under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.


Project Guide


DR. MARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 542


Head of the Department



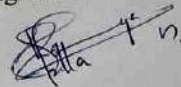
DECLARATION

I, Laya S Pillai, do hereby declare that this project report entitled "**Synthesis of Iron Oxide Nano particles using coir fibre extracts**" is a based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

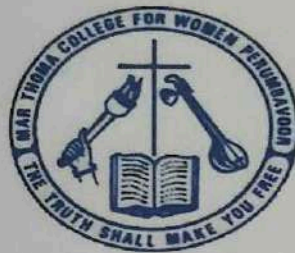
Date: 12.04.2022

Signature:

Handwritten signature of Laya S Pillai, written in black ink. The signature is stylized and includes the name 'Laya S Pillai'.

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University)



CERTIFICATE

This is to certify that the project report entitled **"ENERGY AUDIT – INSTITUTION 2021-22"** is the bonafide work carried out by Ms. ANU PAUL (Reg.no:190021041535) under my guidance and supervision during 2021-2022, in partial fulfilment the requirement for the award of the Degree of Bachelor of Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

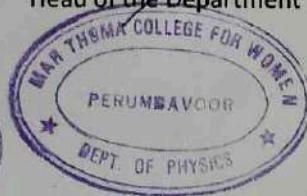
Viva Voice Examination Held on 18/05/22.....

Project Guide

Head of the Department

External Examiner

DR. SURO MARY VARGHESE
Principal-In-charge
Mar Thoma College For Women
Perumbavoor - 683 542



DECLARATION

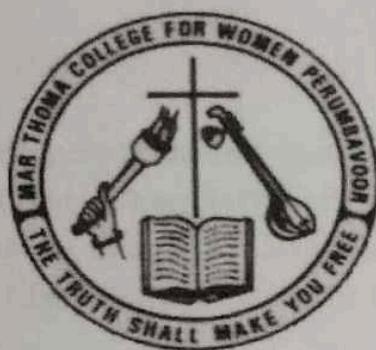
I, ANU PAUL do hereby declare that this project report entitled "ENERGY AUDIT – INSTITUTION 2021-22" is based on the original work and carried out by me under the Guidance of Dr. Anupama P, Assistant Professor, Department Of Physics, Mar Thoma College for Women, Perumbavoor.

Date 18/5/2022
Place Perumbavoor

Anu Paul
ANU PAUL

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

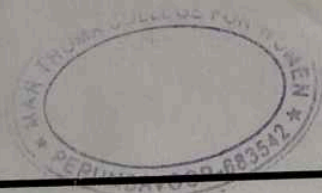
This is to certify that the project report entitled "**Synthesis of Copper Oxide Nano particles**" is the bonafide work carried out by Ms. Lucy Sneha George under my guidance and supervision, as part of the curriculum of Integrated Programme in Basic Science Physics under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Rejani Jacob

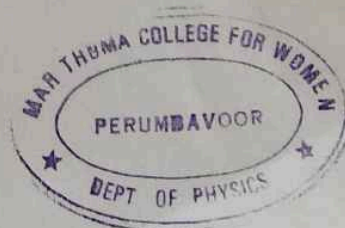
Project Guide

AS

Head of the Department



Sybil
DR. SIBY MARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683542



DECLARATION

I, Lucy Sneha George, do hereby declare that this project report entitled "**Synthesis of Copper Oxide Nano particles**" is based on the original work and carried out by me under the Guidance of **Dr. Rajani Jacob**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

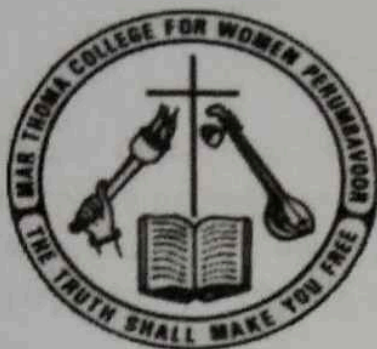
Date: 12.04.2022

Signature:



MAR THOMA COLLEGE FOR WOMEN PERUMBAVOOR

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



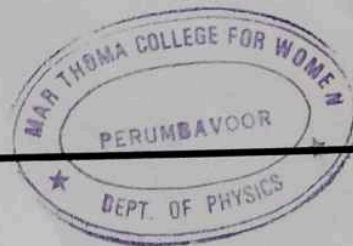
CERTIFICATE

This is to certify that the project report entitled “**Synthesis of Iron Oxide Nano particles using coir fibre extracts**” is the bonafide work carried out by Ms. Krishna V. S. under my guidance and supervision, as part of the curriculum of Integrated Programme in Basic Science Physics under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide

DR. MARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 542

Head of the Department



DECLARATION

I, Krishna V. S., do hereby declare that this project report entitled "**Synthesis of Iron Oxide Nano particles using coir fibre extracts**" is based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

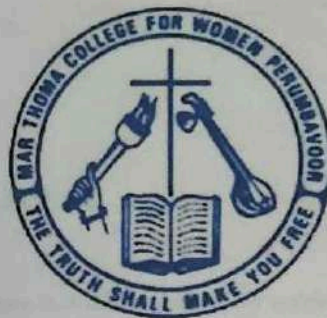
Place: Perumbavoor

Date: 12/04/2022.

Signature:



Mar Thoma College for Women Perumbavoor
(Affiliated to Mahatma Gandhi University)




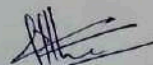
CERTIFICATE

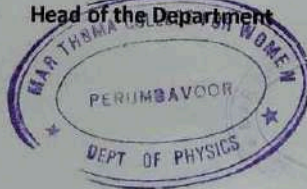
This is to certify that the project report entitled "INDUSTRIAL ENERGY AUDIT" is the bonafide work carried out by Ms. Farsana Ashraf (Reg.no:190021041547) under My guidance and supervision during 2021-2022, in partial fulfilment of the Requirement for the award of the Degree of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

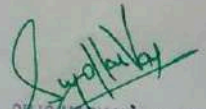
Viva Voice Examination Held on 18/05/2022


Project Guide


Head of the Department


External Examiner



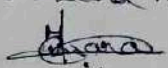

DR. S. J. VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 542

Declaration

I Farsana Ashraf hereby declare that this project report entitled "REPORT ON ENERGY AUDIT PROGRAM " has been prepared by us during the year 2022, under the guidance of Dr. Melvi Chandy ,Department Physics, Mar Thoma college for women Perumbavoor.

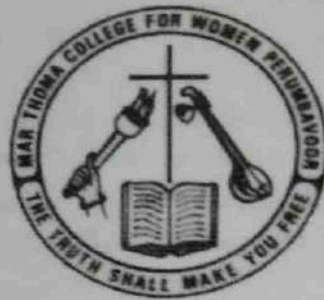
Place : Perumbavoor

Date: 18/5/2022

Farsana Ashraf


**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



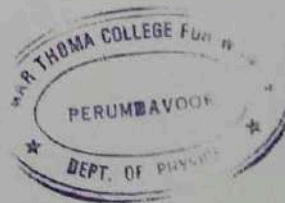
CERTIFICATE

This is to certify that the project report entitled **“Wireless EV Charging Station”** is the bonafide work carried out by Ms. Revathy Rajeev under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide

DR. SUJAMARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 542

Head of the Department



DECLARATION

I, Revathy Rajeev, do hereby declare that this project report entitled "**Wireless EV Charging Station**" is based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

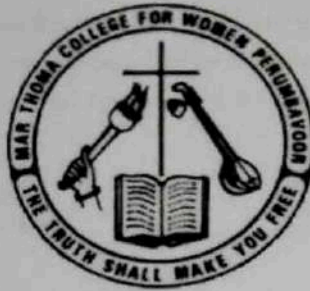
Place: Perumbavoor

Date:

Signature:



MAR THOMA COLLEGE FOR WOMEN PERUMBAVOOR
(Affiliated to Mahatma Gandhi University)

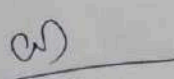


CERTIFICATE

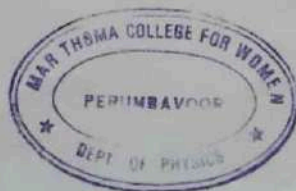
This is to certify that the project report entitled "**HOME ENERGY AUDIT**" is the bonafide work carried out by Ms. Afrin M K (Reg.no:190021041543) under my guidance and supervision during 2021-2022, in partial fulfilment of the requirement for the award of the Degree of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

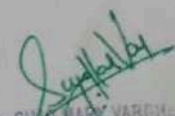
Viva Voice Examination Held on 18/05/2022.....


Project Guide
Examiner


Head of the Department


External





Dr. SIVAS MARY VARGHESE
Principal in-charge
Mar Thoma College For Women
Perumbavoor - 683 542

DECLARATION

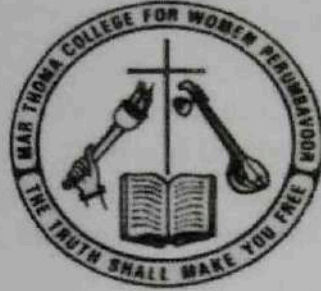
I, Afrin M K do hereby declare that this project report entitled "HOME ENERGY AUDIT" is based on the original work and carried out by me under the Guidance of Dr. Paulose Thomas Department of Physics, Mar Thoma College for Women, Perumbavoor

Date: 18-5-22
Place: perumbavoor


AFRIN M K

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

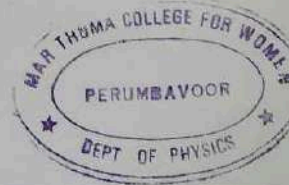
This is to certify that the project report entitled **“Dielectric Constant of a Solid and Liquid”** is the bonafide work carried out by Ms. Nandana Jayan under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide

Head of the Department




DR. SUJO MARY ARGESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 547



DECLARATION

I, Nandana Jayan, do hereby declare that this project report entitled "**Dielectric Constant of a Solid and Liquid**" is based on the original work and carried out by me under the Guidance of **Dr. Paulose Thomas**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

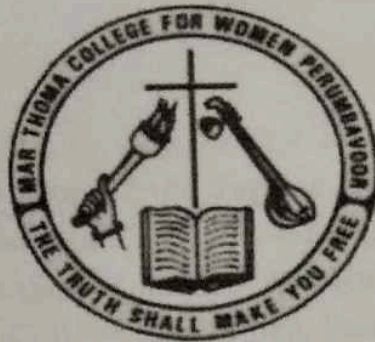
Place: Perumbavoor

Signature: 

Date: 12 | 4 | 20 22


MAR THOMA COLLEGE FOR WOMEN PERUMBAVOOR

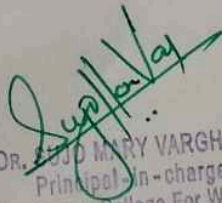
(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



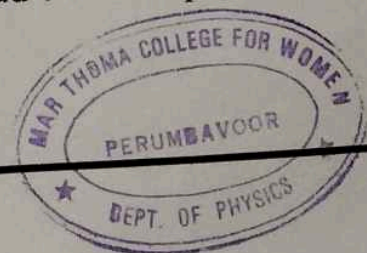
CERTIFICATE

This is to certify that the project report entitled "**Determination of the Mass of the Jupiter from the Orbital data of its Moons using Stellarium**" is the bonafide work carried out by Ms. Shahanas T. S. under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.


Project Guide


DR. JOYD MARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 542


Head of the Department




DECLARATION

I, Shahanas T. S., do hereby declare that this project report entitled "**Determination of the Mass of the Jupiter from the Orbital data of its Moons using Stellarium**" is based on the original work and carried out by me under the Guidance of **Dr. Rajani Jacob**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

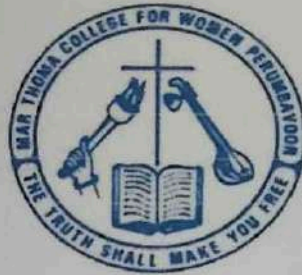
Place: Perumbavoor

Date: 12 | 4 | 2022

Signature: 

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University)




CERTIFICATE


This is to certify that the project report entitled "**HOME ENERGY AUDIT**" is the bonafide work carried out by Ms. AKHILENDU. T. ANIL (Reg.no:190021041544) under my guidance and supervision during 2021-2022, in partial fulfilment of the requirement for the award of the Degree of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

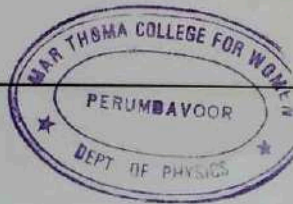
Viva Voice Examination Held on18/05/2022.....

DR. SUDHAKAR VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 683 542


Project Guide


Head of the Department


External Examiner

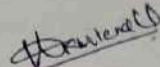


DECLARATION

I, AKHILENDU .T.ANIL do hereby declare that this project report entitled "HOME ENERGY AUDIT" is a based on the original work and carried out by me under the Guidance of Dr.Paulose Thomas Department of Physics, Mar Thoma College for Women, Perumbavoor

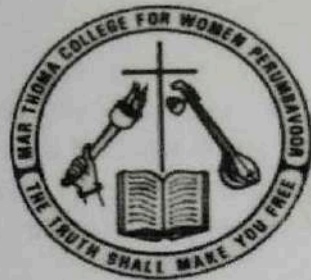
Date: 18-05-2022

Place: Perumbavoor


AKHILENDU.T.ANIL

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

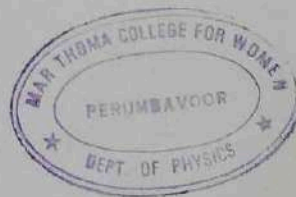
This is to certify that the project report entitled "**Synthesis of Silver Nano Particles Using Coir Fibre Extracts**" is the bonafide work carried out by Ms. Nasooha Jalal under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide

Head of the Department



Dr. S. J. MARCHESI
Principal - in-charge
Mar Thoma College For Women
Perumbavoor - 683 542



DECLARATION

I, **Nasooha Jalal** do hereby declare that this project report entitled "**Synthesis of Silver Nano Particles Using Coir Fibre Extracts**" is a based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

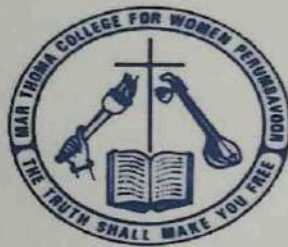
Date: 12/4/2022

Signature:



**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University)



CERTIFICATE

This is to certify that the project report entitled "**ENERGY AUDIT – INSTITUTION 2021-22**" is the bonafide work carried out by Ms. FATHIMATH SANIYA(Reg.no:190021041538) under my guidance and supervision Bacheloried Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

Viva Voice Examination Held on 18/05/2022

Rafoni Jacob

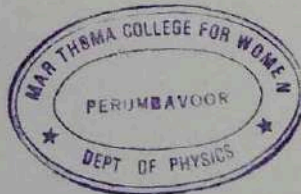
Project Guide

CD

Head of the Department

[Signature]

External Examiner




[Signature]
DR. SUJO MARY VARGHESE
Principal-In-charge
Mar Thoma College For Women
Perumbavoor - 683 542

DECLARATION

I, FATHIMATH SANIYA do hereby declare that this project report entitled "ENERGY AUDIT – INSTITUTION 2021-22" is based on the original work and carried out by me under the Guidance of Dr., RAJANI JACOB Assistant Professor, Department Of Physics, Mar Thoma College for Women, Perumbavoor.

Date 18/5/22
Place Nalamile


FATHIMATH SANIYA

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

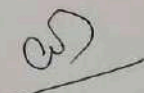
(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



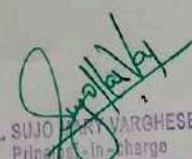
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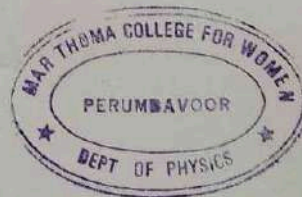
This is to certify that the project report entitled "**Wireless EV Charging Station**" is the bonafide work carried out by Ms. Farisha K.M. under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.


Project Guide


Head of the Department




DR. SUJITHA VARGHESE
Principal - in-charge
Mar Thoma College For Women
Perumbavoor - 683 542



DECLARATION

I, Farisha K. M., do hereby declare that this project report entitled "**Wireless EV Charging Station**" is based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

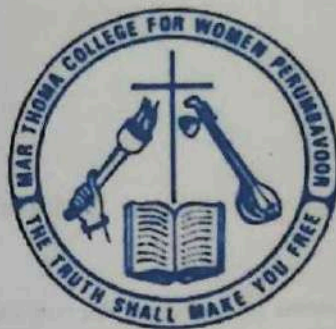
Place: Perumbavoor

Signature:

Date: 12/4/22




Mar Thoma College for Women Perumbavoor
(Affiliated to Mahatma Gandhi University)



CERTIFICATE

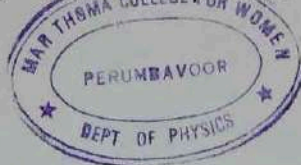
This is to certify that the project report entitled "INDUSTRIAL ENERGY AUDIT" is the bonafide work carried out by Ms. Fathima Shiril (Reg.no:190021041548) under My guidance and supervision during 2021-2022, in partial fulfilment of the Requirement for the award of the Degree of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

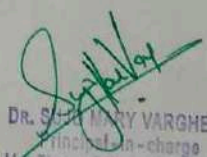
Viva Voice Examination Held on 18/05/2022


Project Guide


Head of the Department


External Examiner




DR. S. MARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor - 693 542

Declaration

I Fathima Shiril hereby declare that this project report entitled "REPORT ON ENERGY AUDIT PROGRAM " has been prepared by us during the year 2022, under the guidance of Dr. Melvi Chandy ,Department Physics, Mar Thoma college for women Perumbavoor.

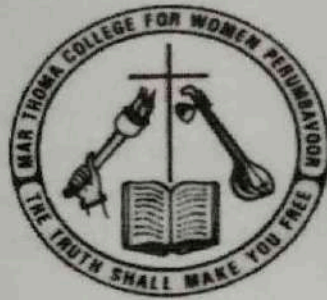
Place : Perumbavoor

Date : 18/05/2022

Fathima Shiril
Shiril
18/05/2022

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

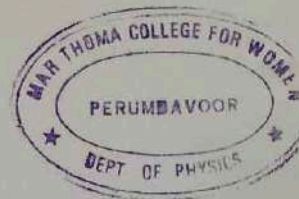
This is to certify that the project report entitled "**Resistivity of a semiconductor using four probe analysis**" is the bonafide work carried out by Ms. Sana Sayed under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide



DR. S. J. VARGHESE
Principal - charge
Mar Thoma College For Women
Perumbavoor - 683 542

Head of the Department



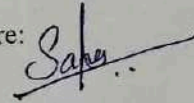
DECLARATION

I, **Sana Sayed**, do hereby declare that this project report entitled "**Resistivity of a semiconductor using four probe analysis**" is a based on the original work and carried out by me under the Guidance of **Dr. Melvi Chandy**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

Date: 12/4/2022

Signature:

A handwritten signature in black ink, appearing to read "Sana Sayed", written over a horizontal line.

**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

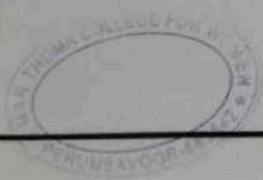
This is to certify that the project report entitled "**CARBON FOOTPRINT ANALYSIS**" is the bonafide work carried out by Ms. Aiswarya Ramesh under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

CS

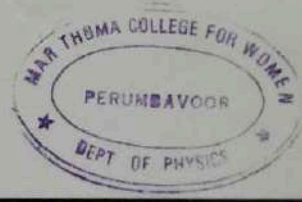
Project Guide

CS

Head of the Department



S. Mary Langhese
Dr. SUJO MARY LANGHESE
Principal-In-charge
Mar Thoma College For Women
Perumbavoor - 683 542




DECLARATION

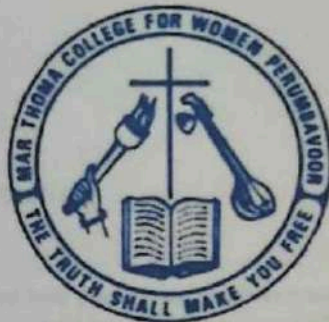
I, **Aiswarya Ramesh** do hereby declare that this project report entitled "**CARBON FOOTPRINT ANALYSIS**" is based on the original work and carried out by me under the Guidance of **Dr. Anupama P.**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

Date: 12/4/2022

Signature: 

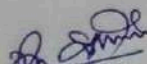
Mar Thoma College for Women Perumbavoor
(Affiliated to Mahatma Gandhi University)




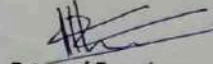
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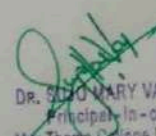
This is to certify that the project report entitled "INDUSTRIAL ENERGY AUDIT" is the bonafide work carried out by Ms. Durga Gopan (Reg.no:190021041546) under My guidance and supervision during 2021-2022, in partial fulfilment of the Requirement for the award of the Degree of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

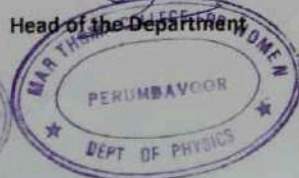
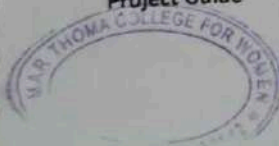
Viva Voice Examination Held on 18/05/2022


Project Guide


Head of the Department


External Examiner


DR. SIO MARY VARGHESE
Principal In-charge
Mar Thoma College For Women
Perumbavoor - 683 547



**MAR THOMA COLLEGE FOR WOMEN
PERUMBAVOOR**

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

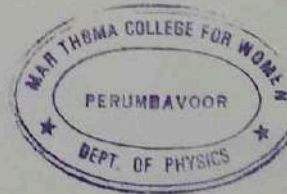
This is to certify that the project report entitled "**Dielectric Constant of a Solid and Liquid**" is the bonafide work carried out by Ms. Najiya A. A. under my guidance and supervision, as part of the curriculum of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Project Guide

Head of the Department

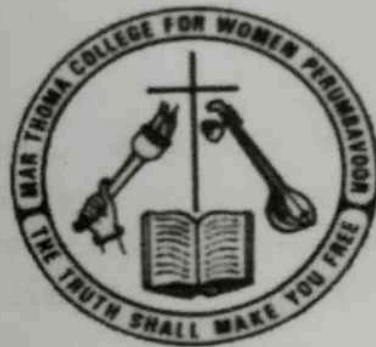


DR. SUJITHA VARGHESE
Principal - in-charge
Mar Thoma College For Women
Perumbavoor - 033 542



MAR THOMA COLLEGE FOR WOMEN PERUMBAVOOR

(Affiliated to Mahatma Gandhi University, Kottayam, Kerala)



CERTIFICATE

This is to certify that the project report entitled "**Synthesis of Copper Oxide Nano particles**" is the bonafide work carried out by Ms. Anagha P. S. under my guidance and supervision, as part of the curriculum of Integrated Programme in Basic Science Physics under the faculty of Science of Mahatma Gandhi University, Kottayam, Kerala during the academic year 2021-2022.

Refoni Jacob

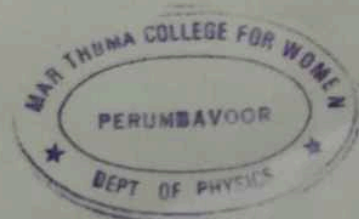
Project Guide

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Head of the Department



Dr. S. MARY VARGHESE
Principal-in-charge
Mar Thoma College For Women
Perumbavoor, 688542



DECLARATION

I, Anagha P. S., do hereby declare that this project report entitled "**Synthesis of Copper Oxide Nano particles**" is a based on the original work and carried out by me under the Guidance of **Dr. Rajani Jacob**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

Date: 12/04/2022

Signature:



Acknowledgment

I would like to thank my supervisor, Dr. Paulose Thomas, for his guidance and support throughout the project. I would also like to thank my friends and family for their encouragement and support.

I would like to thank my supervisor, Dr. Paulose Thomas, for his guidance and support throughout the project. I would also like to thank my friends and family for their encouragement and support.

Declaration

I Anna Davis hereby declare that this project report entitled "REPORT ON ENERGY AUDIT PROGRAM" has been prepared by us during the year 2022, under the guidance of Dr. Paulose Thomas, Department Physics, Mar Thoma college for women Perumbavoor.

Place : Perumbavoor

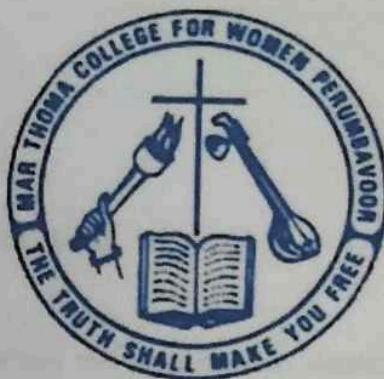
Date : 18/05/2022

Anna Davis



Mar Thoma College for Women Perumbavoor

(Affiliated to Mahatma Gandhi University)




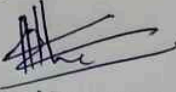
CERTIFICATE

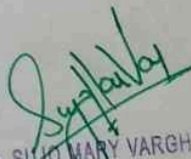
This is to certify that the project report entitled "INDUSTRIAL ENERGY AUDIT" is the bonafide work carried out by Ms. Anna Davis (Reg.no:190021041545) under My guidance and supervision during 2021-2022, in partial fulfilment of the Requirement for the award of the Degree of Bachelor of Science in Physics (Model II Applied Electronics) under the faculty of Science of the Mahatma Gandhi University, Kottayam during the academic session 2021-2022.

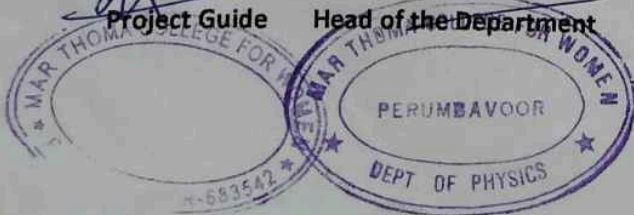
Viva Voice Examination Held on 18/05/2022


Project Guide


Head of the Department


External Examiner


DR. SIJO MARY VARGHESE
Principal-In-charge
Mar Thoma College For Women
Perumbavoor - 683 542



DECLARATION

I, Najiya A. A., do hereby declare that this project report entitled "**Dielectric Constant of a Solid and Liquid**" is based on the original work and carried out by me under the Guidance of **Dr. Paulose Thomas**, Department of Physics, Mar Thoma College for Women, Perumbavoor.

Place: Perumbavoor

Signature:



Date: 12/4/2022

Declaration

I Durga Gopan hereby declare that this project report entitled "REPORT ON ENERGY AUDIT PROGRAM " has been prepared by us during the year 2022, under the guidance of Dr. Paulose Thomas ,Department Physics, Mar Thoma college for women Perumbavoor.

Place : Perumbavoor

Date : 18/05/2022

Durga Gopan
Durga Gopan
18/05/2022