

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECTORS

Submitted by,

Name: Aryalakshmi R Nair

Course: B.Sc. Physics Model 2

Register No: 200021039013



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECTORS

PROJECT REPORT 2020-2023

External examiner:

Sub. ref.
03/05/2023

Internal examiner:

[Signature]

Date of evaluation:

3/5/2023



CERTIFICATE

This is to certify that the project entitled, "PROJECTORS" is a bonafide record of the work done by Aryalakshmi R Nair(200021039013) under my guidance, in the partial fulfilment of the requirement for the award of the Degree of Bachelor of Science in Physics, during the academic year 2022-2023.

Project Guide

Vijutha Sunny
25/09/2023

Dr. Vijutha Sunny, Alphonsa College, Pala



DECLARATION

I hereby declare that the project work entitled "PROJECTORS" submitted to Mahatma Gandhi University Kottayam, is a record of an original work done under the guidance of Dr. Vijutha Sunny, HOD, in the Department of Physics, Alphonsa College, Pala. This work is submitted in the partial fulfilment of the requirements for the award of Degree of Bachelor of Science in Physics. This work has not been submitted elsewhere for the award of any other degree.

Date: 19-04-2023

Place: Pala

Aryalakshmi R Nair



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Department of Physics

B. Sc Physics

2020-2023

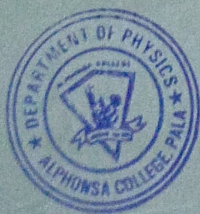
STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA

Submitted By:

1. Name: Aswathy A

Course: B.Sc. PHYSICS (MODEL2)

M.G. University Reg. No: 200021039014



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Department of Physics
B. Sc Physics
2020-2023

PROJECT REPORT

External Examiner:

Subin
02/05/2023

Internal Examiner:

[Signature]

Date of Evaluation:

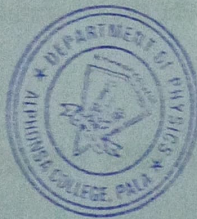
8/5/2023



CERTIFICATE

This is to certify that the project entitled "STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA" carried out by Kum. ASWATHY A, Reg No. 20021039014, of Alphonsa College, Pala in the partial fulfillment of the requirement for the award of Bachelor of Physics under Mahatma Gandhi University during the academic year 2022-23.

Signature
21/08/2023



HEAD OF THE DEPARTMENT OF PHYSICS
ALPHONSA COLLEGE PALA

केंद्रीय काष्ठ परीक्षण प्रयोगशाला, रबर बोर्ड

CENTRAL WOOD TESTING LABORATORY, THE RUBBER BOARD



(वाणिज्य एवं उद्योग मंत्रालय, भारत सरकार)

(Ministry of Commerce & Industry, Govt. of India)

इंजीनियरी एवं संसाधन प्रभाग Engineering & Processing Division

मंगानम पी ओ, कोट्टयम Manganam P O, Kottayam - 686 018

केरल, भारत Kerala, India



WL/40/Fee/12/E&P/2022-23

15/03/2023

PROJECT COMPLETION CERTIFICATE

To whomsoever it may concern

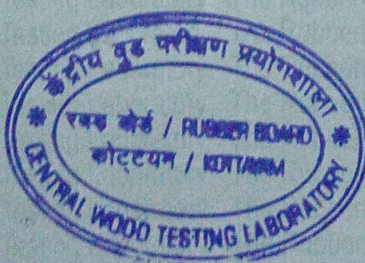
This is to certify that Kum. ASWATHY. A, Reg No.200021039014, Third Year BSc. Physics, Alphonsa College, Pala, under M.G University has carried out the project work at The Central Wood Testing Laboratory, E&P Division, The Rubber Board, Manganam, Kottayam from 22nd December 2022 to 15th February 2023. During the period, we found her conduct to be good and that she is observant and eager to learn. Here are some details on the project.

Projects: "STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA"

Mentor: Jayasree C.E, Lab assistant (Chemistry)

Duration: 22nd December 2022 to 15th February 2023

G.UMASANKAR
FM (P&M)&OIC



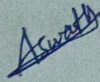
P.ARUMUGAM
JOINT DIRECTOR (P&QC)

DECLARATION

We hereby declare that the project entitled "STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA" submitted to Alphonsa College Pala, for the award of degree of Bachelor of Science in Physics is a record work done by us and it has not previously formed the basis for the award of any degree fellowship.

Aswathy A

(Reg no: 200021039014)



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Department of Physics

B. Sc Physics

2020-2023

STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA

Submitted By:

1. Name: Athira Ashokan

Course: B.Sc. PHYSICS (MODEL2)

M.G. University Reg. No: 200021039015



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Department of Physics

B. Sc Physics

2020-2023

PROJECT REPORT

External Examiner:

Sub. V. -
03/05/2023

Internal Examiner:

[Signature]

Date of Evaluation:

03/05/2023



CERTIFICATE

This is to certify that the project entitled " STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA" carried out by Kum. **ATHIRA ASHOKAN**, Reg No. **200021039015** of Alphonsa College, Pala in the partial fulfillment of the requirement for the award of Bachelor of Physics under Mahatma Gandhi University during the academic year 2022-23.

[Signature]
21/03/2023

HEAD OF THE DEPARTMENT OF PHYSICS
ALPHONSA COLLEGE PALA



केंद्रीय काष्ठ परीक्षण प्रयोगशाला, रबड़ बोर्ड

CENTRAL WOOD TESTING LABORATORY, THE RUBBER BOARD



(वाणिज्य एवं उद्योग मंत्रालय, भारत सरकार)

(Ministry of Commerce & Industry, Govt. of India)

इंजीनियरी एवं संसाधन प्रभाग Engineering & Processing Division

मांगानम पी ओ, कोट्टयम Manganam P O, Kottayam - 686 018

केरल, भारत Kerala, India



WL/40/Fee/12/E&P/2022-23

15/03/2023

PROJECT COMPLETION CERTIFICATE

To whomsoever it may concern

This is to certify that Kum. **ATHIRA ASHOKAN**, Reg No.200021039015, Third Year BSc. Physics, Alphonsa College, Pala, under M.G University has carried out the project work at The Central Wood Testing Laboratory, E&P Division, The Rubber Board, Manganam, Kottayam from 22nd December 2022 to 15th February 2023. During the period, we found her conduct to be good and that she is observant and eager to learn. Here are some details on the project.

Projects: "STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA"

Mentor: Jayasree C.E, Lab assistant (Chemistry)

Duration: 22nd December 2022 to 15th February 2023

G.UMASANKAR
FM (P&M)&OIC



P.ARUMUGAM
JOINT DIRECTOR (P&QC)

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Reduction of cell phone electromagnetic effect on human body

Submitted by,

Name: Delna M Joseph

Course: BSc physics model 2

Reg no:200021039016



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

Reduction of cell phone electromagnetic effect on human body

PROJECT REPORT 2020-2023

External examiner:

Sub. J.
03/05/2023

Internal examiner:

Vishal
03/05/2023

Date of evaluation:



Certificate

This is to certify that the project entitled "**Reduction of cell phone electromagnetic effect on human body**" is a bona fide record of the work done by DELNA M JOSEPH (200021039016) under my guidance, in the partial fulfillment of the requirement for the award of the Degree of Bachelor of Science in Physics, during the academic year 2022-2023.



Project Guide

Mrs Neethu S

Guest Lecturer

Alphonsa College, Pala

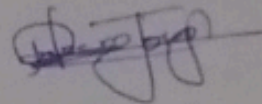


DECLARATION

I hereby declare that the project work entitled, "Reduction of cell phone electromagnetic effect on human body" submitted to Mahatma Gandhi University Kottayam, is a record of an original work done by me under the guidance of Ms. Neethu S, Lecturer, Alphonsa College, Pala

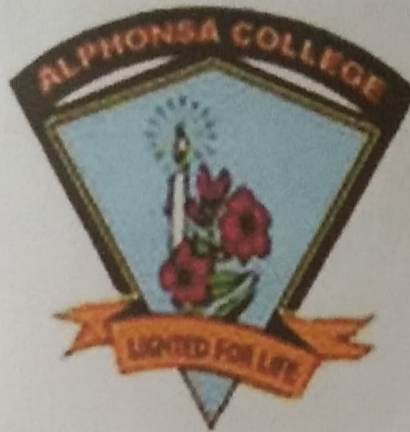
This work is submitted in the partial fulfilment of the requirements for the award of the Degree of Bachelor of Science in Physics. This work has not been submitted elsewhere for the award of any other degree.

Delna M Joseph



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Reduction of cell phone electromagnetic effect on human body

Submitted by,

Name: Devika Soman

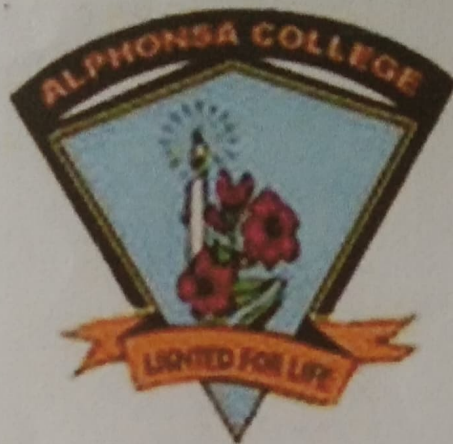
Course: BSc physics model 2

Reg no: 200021039017



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

Reduction of cell phone electromagnetic effect on human body

PROJECT REPORT 2020-2023

External examiner:

Sub ul
03/05/2023

Internal examiner:

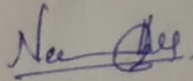
[Signature]
03/05/2023

Date of evaluation:



Certificate

This is to certify that the project entitled "Reduction of cell phone electromagnetic effect on human body" is a bonafide record of the work done by DEVIKA.SOMAN(200021039017) under my guidance, in the partial fulfillment of the requirement for the award of the Degree of Bachelor of Science in Physics, during the academic year 2022-2023.



Project Guide

Mrs Neethu S

Guest Lecturer

Alphonsa College, Pala

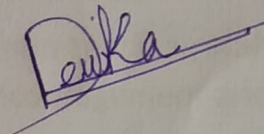


DECLARATION

I hereby declare that the project work entitled, "Reduction of cell phone electromagnetic effect on human body" submitted to Mahatma Gandhi University Kottayam, is a record of an original work done by me under the guidance of Ms. Neethu S, Lecturer, Alphonsa College, Pala

This work is submitted in the partial fulfilment of the requirements for the award of the Degree of Bachelor of Science in Physics. This work has not been submitted elsewhere for the award of any other degree.

Devika Soman



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



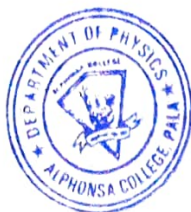
PROJECTORS

Submitted by,

Name: Hrudika Ranjith

Course: B.Sc. Physics Model 2

Register No: 200021039018



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECTORS

PROJECT REPORT 2020-2023

External examiner:

Subin
03/05/2023

Internal examiner:

[Signature]

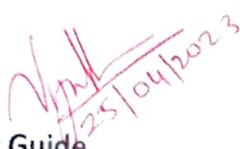


Date of evaluation:

3/5/2023

CERTIFICATE

This is to certify that the project entitled, "PROJECTORS" is a bonafide record of the work done by Hrudika Ranjith(200021039018) under my guidance, in the partial fulfilment of the requirement for the award of the Degree of Bachelor of Science in Physics, during the academic year 2022-2023.


Project Guide

Dr. Vijutha Sunny, Alphonsa College, Pala



DECLARATION

I hereby declare that the project work entitled "PROJECTORS" submitted to Mahatma Gandhi University Kottayam, is a record of an original work done under the guidance of Dr. Vijutha Sunny, HOD, in the Department of Physics, Alphonsa College, Pala. This work is submitted in the partial fulfilment of the requirements for the award of Degree of Bachelor of Science in Physics. This work has not been submitted elsewhere for the award of any other degree.

Date: 19-04-2023

Hrudika Ranjith

Place: Pala



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Reduction of cell phone electromagnetic effect on human body

Submitted by,

Name: Karthika Suku

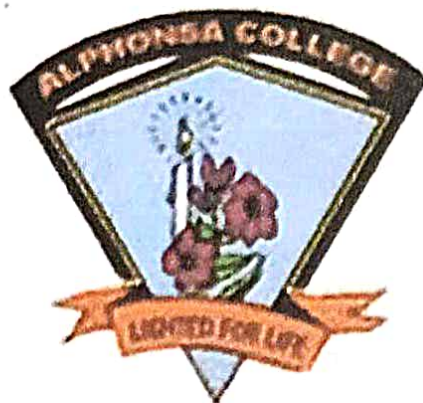
Course: BSc physics model 2

Reg no: 200021039019



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

Reduction of cell phone electromagnetic effect on human body

PROJECT REPORT 2020-2023

External examiner: *Subin*
03/05/2023

Internal examiner:


Date of evaluation:

Subin
03/05/2023



Certificate

This is to certify that the project entitled "Reduction of cell phone electromagnetic effect on human body" is a bona fide record of the work done by KARTHIKA.SUKU(200021039019) under my guidance, in the partial fulfillment of the requirement for the award of the Degree of Bachelor of Science in Physics, during the academic year 2022-2023.



Project Guide

Mrs Neethu S

Guest Lecturer

Alphonsa College, Pala

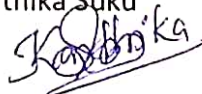


DECLARATION

I hereby declare that the project work entitled, "Reduction of cell phone electromagnetic effect on human body" submitted to Mahatma Gandhi University Kottayam, is a record of an original work done by me under the guidance of Ms. Neethu S, Lecturer, Alphonsa College, Pala

This work is submitted in the partial fulfilment of the requirements for the award of the Degree of Bachelor of Science in Physics. This work has not been submitted elsewhere for the award of any other degree.

Karthika Suku



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Solar Energy and its Applications



Submitted by,

Name: Lekshmi Raj G

Course: B.Sc. Physics Model 2

Reg No: 200021039020

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Solar Energy and its Applications

PROJECT REPORT 2020-2023

External examiner:

Subin
03/05/2023

Internal examiner:

[Signature]
31/5/2023

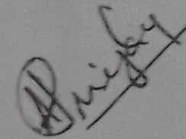
Date of evaluation:



CERTIFICATE

This is to certify that the project entitled, "Solar energy and it's applications" is a bona fide record of the work done by Lekshmi Raj G (200021039020) under my guidance, in the partial fulfilment of the requirement for the award of the Degree of Bachelor of Science in Physics, during the academic year 2022-2023.

Project Guide



Dr. Sr. Priya Antony

Assistant professor

Alphonsa College, Pala



DECLARATION

I hereby declare that the project work entitled "Solar energy and it's applications" submitted to Mahatma Gandhi University Kotayam, is a record of an original work done by me under the guidance of Dr. Sr Priya Antony, Assistant Professor, Department of Physics, Alphonsa College, Pala. This work is submitted in the partial fulfilment of the requirement for the award of Degree of Bachelor of Science in Physics. This work has not been submitted elsewhere for the award of any other degree.

Date: 03 - 05 - 2023

Place: Pala

Lekshmi Raj G

B.Sc. Physics Model 2

Reg No: 200021039020



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECTORS

Submitted by,

Name: Maithreyi Ullas

Course: B.Sc. Physics Model 2

Register No: 200021039021



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECTORS

PROJECT REPORT 2020-2023

External examiner:

Subin
03/05/2023

Internal examiner:

[Signature]

Date of evaluation:

3/5/2023



CERTIFICATE

This is to certify that the project entitled, "PROJECTORS" is a bonafide record of the work done by Maithreyi Ullas (200021039021) under my guidance, in the partial fulfillment of the requirement for the award of the Degree of Bachelor of Science in Physics, during the academic year 2022-2023.

Project Guide

Dr. Vijutha Sunny, Alphonsa College, Pala



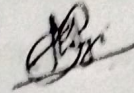
DECLARATION

I hereby declare that the project work entitled "PROJECTORS" submitted to Mahatma Gandhi University Kottayam, is a record of an original work done under the guidance of Dr. Vijutha Sunny, HOD, in the Department of Physics, Alphonsa College, Pala. This work is submitted in the partial fulfilment of the requirements for the award of Degree of Bachelor of Science in Physics. This work has not been submitted elsewhere for the award of any other degree.

Date: 19-04-2023

Maithreyi Ullas

Place: Pala



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Solar Energy and its Applications



Submitted by,

Name: Nandana Jayakumar

Course: B.Sc. Physics Model 2

Reg No: 200021039023

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Solar Energy and its Applications

PROJECT REPORT 2020-2023



External examiner:

Sub. up.
03/05/2023

Internal examiner:

[Signature]
3/5/2023

Date of evaluation:

CERTIFICATE

This is to certify that the project entitled, "Solar energy and it's applications" is a bona fide record of the work done by Nandana Jayakumar (200021039023) under my guidance, in the partial fulfilment of the requirement for the award of the Degree of Bachelor of Science in Physics, during the academic year 2022-2023.

Project Guide



Dr. Sr. Priya Antony

Assistant professor

Alphonsa College, Pala



DECLARATION

I hereby declare that the project work entitled "Solar energy and it's applications" submitted to Mahatma Gandhi University Kottayam, is a record of an original work done by me under the guidance of Dr. Sr Priya Antony, Assistant Professor, Department of Physics, Alphonsa College, Pala. This work is submitted in the partial fulfilment of the requirement for the award of Degree of Bachelor of Science in Physics. This work has not been submitted elsewhere for the award of any other degree.

Date: 03-05-2023

Place: Pala

Nandana

Nandana Jayakumar

B.Sc. Physics Model 2

Reg No: 200021039023



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Department of Physics

B. Sc Physics

2020-2023

STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA

Submitted By:

1. Name : NANDHANA PUSHPAN

Course : B.Sc. PHYSICS (MODEL2)

M.G. University

Reg. No : 200021039024



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Department of Physics

B. Sc Physics

2020-2023

PROJECT REPORT

External Examiner:

Subin
02/05/2023

Internal Examiner:

[Signature]

Date of Evaluation:

3/5/2023



CERTIFICATE

This is to certify that the project entitled " STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA" carried out by Kum. **NANDHANA PUSHPAN**, Reg No. **200021039024** of Alphonsa College, Pala in the partial fulfillment of the requirement for the award of Bachelor of Physics under Mahatma Gandhi University during the academic year 2022-23.

[Signature]
21/03/2023

HEAD OF THE DEPARTMENT OF PHYSICS
ALPHONSA COLLEGE PALA



केंद्रीय काष्ठ परीक्षण प्रयोगशाला, रबड़ बोर्ड

CENTRAL WOOD TESTING LABORATORY, THE RUBBER BOARD



(वाणिज्य एवं उद्योग मंत्रालय, भारत सरकार)

(Ministry of Commerce & Industry, Govt. of India)

इंजीनियरी एवं संसाधन प्रभाग Engineering & Processing Division

मांगानम पी ओ, कोट्टयम Manganam P O, Kottayam - 686 018

केरल, भारत Kerala, India



WL/40/Fee/12/E&P/2022-23

15/03/2023

PROJECT COMPLETION CERTIFICATE

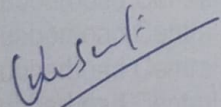
To whomsoever it may concern

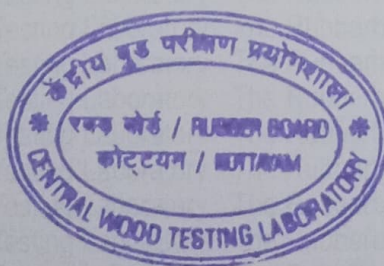
This is to certify that Kum. **NANDHANA PUSHPAN**, Reg No. **200021039024**, Third Year BSc. Physics, Alphonsa College, Pala, under M.G University has carried out the project work at The Central Wood Testing Laboratory, E&P Division, The Rubber Board, Manganam, Kottayam from 22nd December 2022 to 15th February 2023. During the period, we found her conduct to be good and that she is observant and eager to learn. Here are some details on the project.

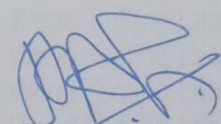
Projects: **"STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA"**

Mentor: Jayasree C.E, Lab assistant (Chemistry)

Duration: 22nd December 2022 to 15th February 2023


G.UMASANKAR
FM (P&M)&OIC



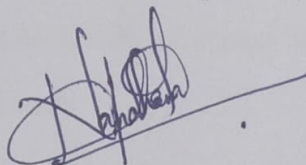

P.ARUMUGAM
JOINT DIRECTOR (P&QC)

Use rubber wood; save rain forests

DECLARATION

We hereby declare that the project entitled “ STUDY ON DENSITY AND HARDNESS OF FIVE PROMINENT WOOD SPECIES OF KERALA” submitted to Alphonsa College Pala, for the award of degree of Bachelor of Science in Physics is a record work done by us and it has not previously formed the basis for the award of any degree fellowship.

Nandhana Pushpan (Reg no: 200021039024)



THERMODYNAMICS OF BTZ BLACK HOLE

A DISSERTATION SUBMITTED TO THE MAHATMA GANDHI UNIVERSITY IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN PHYSICS .

By

NAYAN HRIDYA PRAKASH (Reg.No.200021039025)

Under the supervision of

Dr. Sr. Priya Antony

Assistant professor, Department of Physics

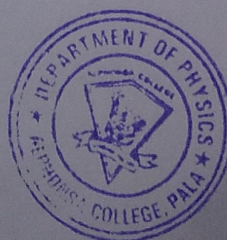
Alphonsa College Pala



Year 2020-2023

Department of Physics

Alphonsa College Pala



DEPARTMENT OF PHYSICS

ALPHONSA COLLEGE

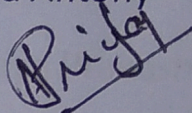
Pala, Kottayam, India, 68657

CERTIFICATE

This is to certify that the dissertation entitled, "Thermodynamics of BTZ Black Hole" is the original work done by Nayan Hridya Prakash of Alphonsa college, Pala in partial fulfilment of requirement for the award of bachelor of science in Physics course prescribed by the Alphonsa college Pala.

PROJECT GUIDE

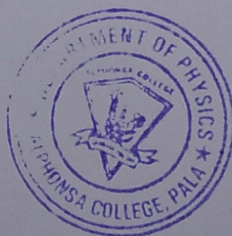
Dr.Sr. Priya Antony

Signature: 

Assistant Proffessor

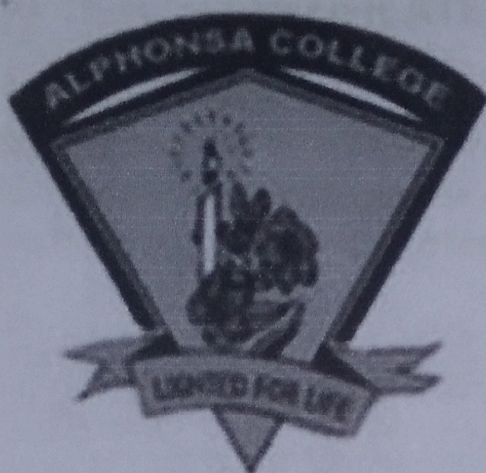
Department of Physics

Alphonsa College Pala



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



THERMODYNAMICS OF BTZ BLACKHOLE

PROJECT REPORT 2020-2023

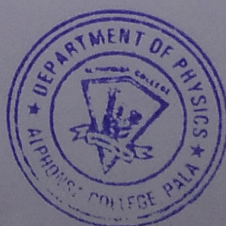
External examiner:

Subant
25/05/2023

Internal examiner:

Nikhil
31/5/2023

Date of evaluation:



DECLARATION

We hereby declare that the project work entitled "**Thermodynamics of BTZ Black Hole**" submitted to Mahatma Gandhi University Kottayam, is a record of an original work done by us under the guidance of Dr. Sr.Priya Antony, Assistant Professor, Alphonsa college Pala.

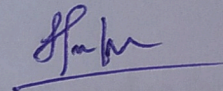
This project work is submitted in partial fulfilment of requirement for the award of Degree of Bachelor of Science.

This work has not been submitted elsewhere for the award of any other degree.

Place: Pala

Date:

Nayan Hridya Prakash



DEPARTMENT OF PHYSICS

ALPHONSA COLLEGE

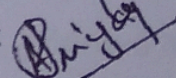
Pala, Kottayam, India, 68657

CERTIFICATE

This is to certify that the dissertation entitled, "Thermodynamics of BTZ Black Hole" is the original work done by Remya M of Alphonsa college, Pala in partial fulfilment of requirement for the award of bachelor of science in Physics course prescribed by the Alphonsa college Pala.

PROJECT GUIDE

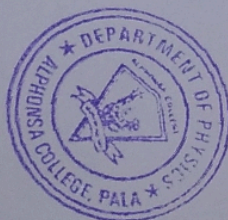
Dr.Sr. Priya Antony

Signature: 

Assistant Proffessor

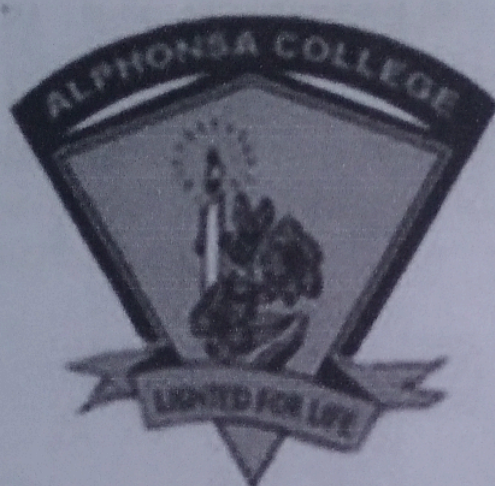
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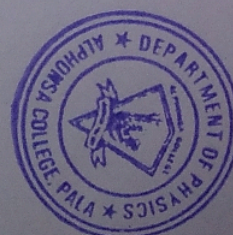
External examiner:

Subir
03/05/2023

Internal examiner:

Vijay
03/05/2023

Date of evaluation:



THERMODYNAMICS OF BTZ BLACK HOLE

A DISSERTATION SUBMITTED TO THE MAHATMA GANDHI UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN PHYSICS.

By

REMYA M (Reg.No.200021039026)

Under the supervision of

Dr. Sr. Priya Antony

Assistant professor, Department of Physics

Alphonsa College Pala



Year 2020-2023

Department of Physics

Alphonsa College Pala



DECLARATION

We hereby declare that the project work entitled "**Thermodynamics of BTZ Black Hole**" submitted to Mahatma Gandhi University Kottayam, is a record of an original work done by us under the guidance of Dr. Sr. Priya Antony, Assistant Professor, Alphonsa college Pala.

This project work is submitted in partial fulfilment of requirement for the award of Degree of Bachelor of Science.

This work has not been submitted elsewhere for the award of any other degree.

Place: Pala

Date:

Remya M

