

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Department of Physics

B. Sc Physics

2020-2023

PROJECT REPORT

SOLAR MOBILE CHARGER

External Examiner: 

Internal Examiner

Date of Evaluation: 03/05/2023

CERTIFICATE

This is to certify that the project entitled **SOLAR MOBILE CHARGER** carried out by Kumari Alina Alexander, Reg no.200021035662 of Alphonsa college pala, in the partial fulfillment of the requirement for the award for the bachelor of Science in physics under Mahatma Gandhi University during the academic year 2020 to 2023.

?

Faculty in charge,

Dr.Minu Joy

Department of physics

Alphonsa College Pala



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECT REPORT

Department of Physics

B. Sc Physics

2020-2023

SOLAR MOBILE CHARGER

External Examiner:

A handwritten signature in green ink, appearing to be 'Subodh', written over a horizontal line.

Internal Examiner:

A handwritten signature in black ink, appearing to be 'Ajay', written over a horizontal line.

Date of Evaluation:

3/5/2023

CERTIFICATE

This is to certify that the project entitled "Solar Mobile Charger" carried out by Kumari Aiswarya Laneesan Reg no:200021035685 of Alphonsa College , in the partial fulfillment of the requirement for the award for the Bachelor of Science and physics under Mahatma Gandhi university during the academic year 2020-2023 .

Faculty in Charge

Dr. Minu Joy



Department of Physics

Alphonsa College Pala



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

STUDY ON COMETS

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 “STUDY ON COMETS” is a bona fide record of the work done by JANS MARIA ANIKUMAR (200021035673) , 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

Ms. Cincila T Joy

Associate Professor

Alphonsa College, Pala



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

STUDY ON COMETS

PROJECT REPORT 2020-2023

External examiner:

Subi

Internal examiner:

Nyul

Date of evaluation:

3/5/2023

CERTIFICATE

This is to certify that the project entitled "STUDY ON COMETS" is a bona fide record of the work done by AMEESHA V R (200021035663), 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

Ms. Cincila T Joy

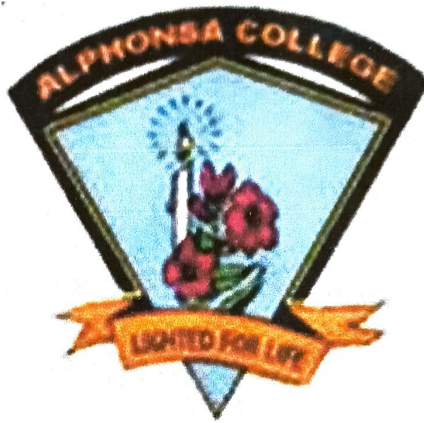
Associate Professor

Alphonsa College, Pala



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

STUDY ON COMETS

PROJECT REPORT 2020-2023

External examiner:

Sub J
03/05/23

Internal examiner:

V. J. J.
27/5/2023

Date of evaluation:

CERTIFICATE

This is to certify that the project entitled “STUDY ON COMETS” is a bona fide record of the work done by ANJUMOL J (200021035668) , 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

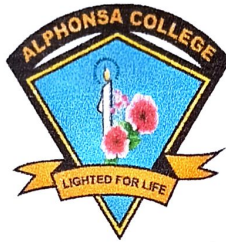
Ms. Cincila T Joy

Associate Professor

Alphonsa College, Pala



ALPHONSA COLLEGE, PALA
(Affiliated to Mahatma Gandhi University, Kottayam)



Department of Physics
B. Sc Physics

PROJECT REPORT 2020-2023

External examiner:

*Subin
10/10/2023*

Internal examiner:

[Signature]

Date of evaluation:

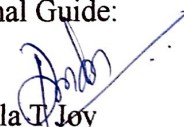
8/5/2023

CERTIFICATE

This is to certify that the project entitled “**SMART MATERIALS**” is a bona fide record of the work done by **ROSE CHERIAN, Reg. No. 20021035691** 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 2020-2023.

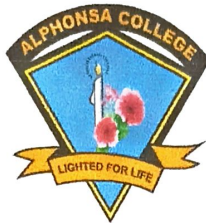
External Guide :

Internal Guide:


Cincila T. Joy
Department of Physics
Alphonsa College Pala



ALPHONSA COLLEGE, PALA
(Affiliated to Mahatma Gandhi University, Kottayam)



Department of Physics
B. Sc Physics

PROJECT REPORT 2020-2023

External examiner:

Subin
03/05/23

Internal examiner:

[Signature]

Date of evaluation:

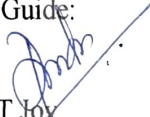
8/5/2023

CERTIFICATE

This is to certify that the project entitled “SMART MATERIALS” is a bona fide record of the work done by **AMRUTHALAKSHMI S, Reg. No. 20021035664** 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 2020-2023.

External Guide :

Internal Guide:


Cincila T Joy
Department of Physics
Alphonsa College Pala



FUTURE OF ASTEROID MINING

Dissertation submitted to

MAHATMA GANDHI UNIVERSITY

In partial fulfilment of the requirement for the award of the

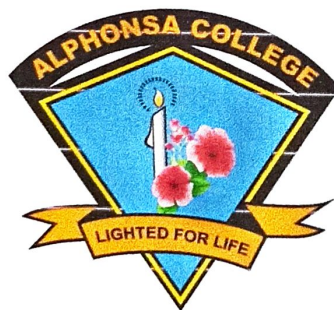
Degree of Bachelor of Science

Submitted by

ALU SHAJI [Reg.no. 200021035686]

Under the guidance of

Ms. REKHA MATHEW



DEPARTMENT OF PHYSICS

ALPHONSA COLLEGE PALA

MARCH, 2023

*Sub of
Astro*

CERTIFICATE

Certified that the project work entitled "**FUTURE OF ASTEROID MINING**" is an authentic record of the work done by **ALU SHAM** with register no. **200021035686** under my supervision in the Department of Physics as part of the partial fulfilment for the award of Degree of Bachelor in Physics during 2022-2023.

Guide and supervisor

Rekha Mathew
20/3/23
Dr. Rekha Mathew

Head of the Department

Dr. Vijutha Sunny
3/3/2023
Dr. Vijutha Sunny

Place : Pala

Date : 15/03/2023



Department seal

FUTURE OF ASTEROID MINING

Dissertation submitted to

MAHATMA GANDHI UNIVERSITY

In partial fulfilment of the requirement for the award of the

Degree of Bachelor of Science

Submitted by

ANAKHA ELIZABATH SUNNY
[Reg.no. 200021035665]

Under the guidance of

Ms. REKHA MATHEW



DEPARTMENT OF PHYSICS

ALPHONSA COLLEGE PALA

MARCH, 2023

Sub J
07/05/2023

CERTIFICATE

Certified that the project work entitled "FUTURE OF ASTEROID MINING" is an authentic record of the work done by ANAKHA ELIZABATH SUNNY with register no. 200021035665 under my supervision in the Department of Physics as part of the partial fulfilment for the award of Degree of Bachelor in Physics during 2022-2023.

Guide and supervisor

Rekha Mathew
20/3/23
Ms.Rekha Mathew

Vijutha Sunny
3/5/2023
Head of the Department

Dr.Vijutha Sunny

Place : Pala

Date : 15/03/2023



Department seal

FUTURE OF ASTEROID MINING

Dissertation submitted to

MAHATMA GANDHI UNIVERSITY

In partial fulfilment of the requirement for the award of the

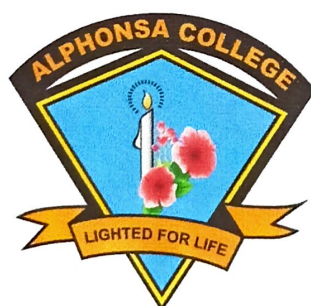
Degree of Bachelor of Science

Submitted by

ARDRA PR [Reg.no.200021035687]

Under the guidance of

Ms. REKHA MATHEW



DEPARTMENT OF PHYSICS

ALPHONSA COLLEGE PALA

MARCH, 2023

Suby

CERTIFICATE

Certified that the project work entitled "**FUTURE OF ASTEROID MINING**" is an authentic record of the work done by **ARDRA PR [Reg.no 200021035687]** under my supervision in the Department of Physics as part of the partial fulfilment for the award of Degree of Bachelor in Physics during 2022-2023.

Guide and supervisor

Ms.Rekha Mathew

Rekha Mathew
28/3/23

Head of the Department

Dr.Vijutha Sunny

Vijutha Sunny
26/4/2023

Place : Pala

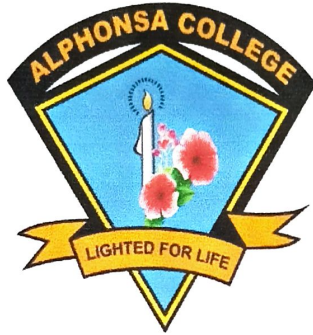
Date : 20/03/2023



Department seal

ALPHONSA COLLEGE , PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

B.Sc Physics 2020-23

This is to certify that the project report on the topic “**Study of Stellar Evolution Using Hertzsprung-Russell Diagram**” is a bonafide record of the work done by **Miss. Lakshmi M.S.** (Reg. No: 200021035679) towards the partial fulfillment of the final year Bachelor Degree in Physics at Alphonsa College Pala, affiliated to the Mahatma Gandhi University during 2020-23 academic year.


Dr. Vijitha Sunny 23/3/2023


Head of Department of Physics

Alphonsa College Pala


Miss Rekha Mathew 29/3/23

(Internal Guide)

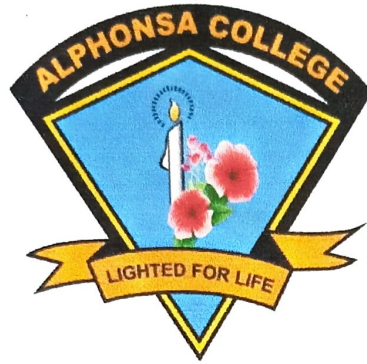
Alphonsa College Pala


03/05/2023



ALPHONSA COLLEGE , PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

B.Sc Physics 2020-23

This is to certify that the project report on the topic “**Study of Stellar Evolution Using Hertzsprung-Russell Diagram**” is a bonafide record of the work done by **Miss. Sanoofiya V.P. (Reg.No:200021035684)** towards the partial fulfillment of the final year Bachelor Degree in Physics at Alphonsa College Pala, affiliated to the Mahatma Gandhi University during 2020-23 academic year.

Vijitha Sunny
23/3/2023

Dr. Vijitha Sunny

Head of Department of Physics
Alphonsa College Pala

Rekha Mathew
23/3/23

Miss Rekha Mathew

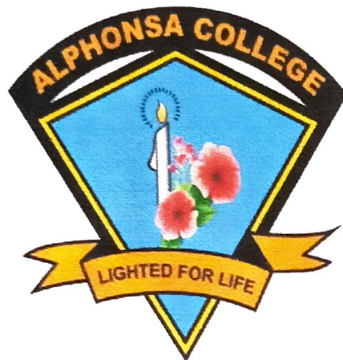
(Internal Guide)

Alphonsa College Pala

Subir
03/05/2023

ALPHONSA COLLEGE , PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

B.Sc Physics 2020-23

This is to certify that the project report on the topic “**Study of Stellar Evolution Using Hertzsprung-Russell Diagram**” is a bonafide record of the work done by **Miss. Angela Benoy (Reg. No: 200021035666)** towards the partial fulfillment of the final year Bachelor Degree in Physics at Alphonsa College Pala, affiliated to the Mahatma Gandhi University during 2020-23 academic year.

Vijitha
23/3/2023
Dr. Vijitha Sunny

Head of Department of Physics

Alphonsa College Pala

Rekha
24/3/23
Miss Rekha Mathew

(Internal Guide)

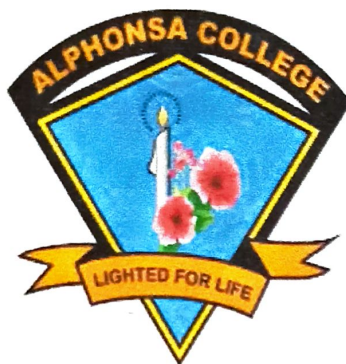
Alphonsa College Pala

Sub up
03/06/2023



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

B.Sc Physics
2020-23

This is to certify that the project report on the topic **“Effect of Veneer Orientation in the Calculation of Bending Strength in Plywood”** is a bonafide record of the work done by **Ms. Anjali P Mathew (Reg. No.: 200021035667)** towards the partial fulfillment of her final year Bachelor degree in Physics at Alphonsa College Pala, affiliated to the Mahatma Gandhi University during 2020-23 academic year.

Dr. Vijutha Sunny

(Internal Guide & Head of the Department)

दूरभाष Phone: + 91 - 481 257 7378

फैक्स Fax: + 91 - 481 257 4751

ई मेल E-mail: woodlab@rubberboard.org.in

वेब Web: www.rubberboard.org.in

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 **Ms. ANJALI P MATHEW** Reg No. **200021035667** of 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 25th November 2022 to 31st January 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: "EFFECT OF VENEER ORIENTATION IN CALCULATION OF BENDING STRENGTH OF PLYWOOD".

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

Duration: 25th November 2022 to 31st January 2023

G.UMASANKAR
FM (P&M)&OIC



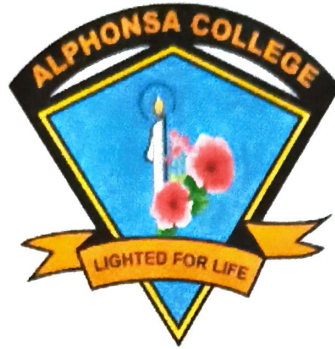
P.ARUMUGAM
JOINT DIRECTOR (P&QC)

Use rubber wood; save rain forests

Page 1 of 1

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

B.Sc Physics

2020-23

This is to certify that the project report on the topic “**Effect of Veneer Orientation in the Calculation of Bending Strength in Plywood**” is a bonafide record of the work done by **Ms. Poornima U (Reg. No.: 200021035682)** towards the partial fulfillment of her final year Bachelor degree in Physics at Alphonso College Pala, affiliated to the Mahatma Gandhi University during 2020-23 academic year.

Dr. Vijutha Sunny

(Internal Guide & Head of the Department)

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 **Ms. POORNIMA U Reg No. 200021035682** of 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 25th November 2022 to 31st January 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: "EFFECT OF VENEER ORIENTATION IN CALCULATION OF BENDING STRENGTH OF PLYWOOD".

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

Duration: 25th November 2022 to 31st January 2023

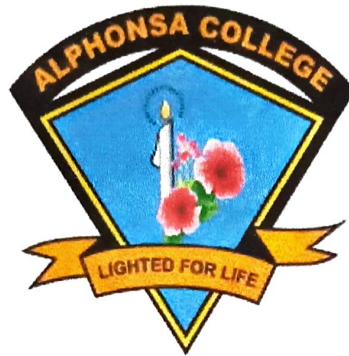
G.UMASANKAR
FM (P&M)&OIC



P.ARUMUGAM
JOINT DIRECTOR (P&QC)

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

B.Sc Physics
2020-23

This is to certify that the project report on the topic “**Effect of Veneer Orientation in the Calculation of Bending Strength in Plywood**” is a bonafide record of the work done by **Ms. Jyothi Ann Jojo (Reg. No.: 200021035678)** towards the partial fulfillment of her final year Bachelor degree in Physics at Alphonsa College Pala, affiliated to the Mahatma Gandhi University during 2020-23 academic year.

Dr. Vijutha Sunny

(Internal Guide & Head of the Department)

Sub ref ~
03/05/2023 2

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 **Ms. JYOTHI ANN JOJO Reg No. 200021035678** of 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 25th November 2022 to 31st January 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: "EFFECT OF VENEER ORIENTATION IN CALCULATION OF BENDING STRENGTH OF PLYWOOD".

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

Duration: 25th November 2022 to 31st January 2023

G.UMASANKAR
FM (P&M)&OIC



P.ARUMUGAM
JOINT DIRECTOR (P&QC)

ALPHONSA COLLEGE, PALA
(Affiliated to Mahatma Gandhi University)



**EXOPLANET DETECTION USING RADIAL
VELOCITY METHOD**

PROJECT REPORT 2020-23

External Examiner:

Subbu
03/05/2023

Internal Examiner:

[Signature]
03/05/2023

Date of Evaluation

CERTIFICATE

This is to certify that the project entitled, "EXOPLANET DETECTION USING RADIAL VELOCITY METHOD" is a bona fide record of the work done by Joshma Joseph (200021035690) 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.



Mentor
Dr. Minu Joy
Professor
Alphonsa College, Pala



Project Guide
Dr. Charles Jose
Department of Physics
CUSAT



ALPHONSA COLLEGE, PALA
(Affiliated to Mahatma Gandhi University)



**EXOPLANET DETECTION USING RADIAL
VELOCITY METHOD**

PROJECT REPORT 2020-23

External Examiner:

Sub. J.
03/05/2023

Internal Examiner:

[Signature]
03/05/2023

Date of Evaluation

03/05/2023

CERTIFICATE

This is to certify that the project entitled, "EXOPLANET DETECTION USING RADIAL VELOCITY METHOD" is a bona fide record of the work done by Binsa Asha Bobby (200021035669) 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.



Mentor
Dr. Minu Joy
Professor
Alphonsa College, Pala



Project Guide
Dr. Charles Jose
Department of Physics
CUSAT



ALPHONSA COLLEGE, PALA
(Affiliated to Mahatma Gandhi University)



**EXOPLANET DETECTION USING RADIAL
VELOCITY METHOD**

PROJECT REPORT 2020-23

External Examiner:

Subin
03/05/2023

Internal Examiner:

[Signature]

Date of Evaluation

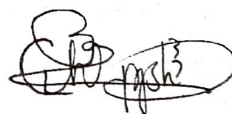
03/05/2023

CERTIFICATE

This is to certify that the project entitled, "EXOPLANET DETECTION USING RADIAL VELOCITY METHOD" is a bona fide record of the work done by Elsa Maria Nobi (200021035670) 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.



Mentor
Dr. Minu Joy
Professor
Alphonsa College, Pala



Project Guide
Dr. Charles Jose
Department of Physics
CUSAT



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

HUBBLE DIAGRAM PLOTTING

PROJECT REPORT 2020-2023

External Examiner:

Subin
23/05/2023

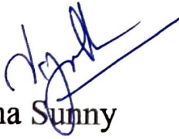
Internal Examiner:

Arul
08/5/2023

Date of Evaluation:

CERTIFICATE

This is to certify that the project entitled “**Hubble diagram plotting**” is a bona-fide record of the work done by GILBY KURIAN (200021035672), towards the partial fulfilment of the final year Bachelor Degree in Physics at Alphonsa College Pala, affiliated to Mahatma Gandhi University during the academic year 2020-2023.



Dr. Vijutha Sunny

Head of Physics Department

Alphonsa College Pala



Project Guide

Dr. Minu Joy

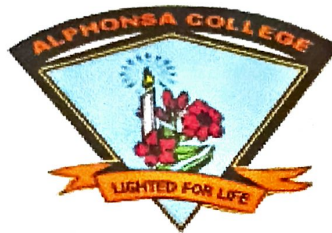
Associate Professor

Department of Physics



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

HUBBLE DIAGRAM PLOTTING

PROJECT REPORT 2020-2023

External Examiner:

Internal Examiner:

Date of Evaluation:

Subert
03/10/2023
Subert
03/10/2023

CERTIFICATE

This is to certify that the project entitled “**Hubble diagram plotting**” is a bona-fide record of the work done by LIYA LINZ JOLLY (200021035680), towards the partial fulfilment of the final year Bachelor Degree in Physics at Alphonsa College Pala, affiliated to Mahatma Gandhi University during the academic year 2020-2023.



Dr. Vijutha Sunny

Head of Physics Department

Alphonsa College Pala



Project Guide

Dr. Minu Joy

Associate Professor

Department of Physics



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



DEPARTMENT OF PHYSICS

HUBBLE DIAGRAM PLOTTING

PROJECT REPORT 2020-2023

External Examiner:

Subin
03/05/2023

Internal Examiner:

Arjun
03/05/2023

Date of Evaluation:

CERTIFICATE

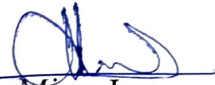
This is to certify that the project entitled “**Hubble diagram plotting**” is a bona-fide record of the work done by MEKHANA RADHAKRISHNAN (200021035681), towards the partial fulfilment of the final year Bachelor Degree in Physics at Alphonsa College Pala, affiliated to Mahatma Gandhi University during the academic year 2020-2023.



Dr. Vijutha Sunny

Head of Physics Department

Alphonsa College Pala



Dr. Minu Joy

(Project Guide)

Associate Professor

Department of Physics

Alphonsa College, Pala



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECT REPORT

Department of Physics

B. Sc Physics

2020-2023

STUDY ON IMPACT OF DENSITY ON BENDING STRENGTH OF DIFFERENT WOOD SPECIES

External Examiner:

Subin
05/05/2023

Internal Examiner:

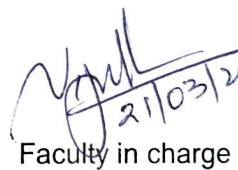
[Signature]

Date of Evaluation:

05/05/2023

CERTIFICATE

This is to certify that the project entitled "STUDY ON IMPACT OF DENSITY ON BENDING STRENGTH OF DIFFERENT WOOD SPECIES" carried out by Kum.**JENNA GEORGE**, Reg No.**200021035674** ,of Alphonsa College Pala in the partial fulfilment of the requirement for the award of Bachelor of Science in Physics under Mahatma Gandhi University during the academic year 2020-23.


21/03/2023

Faculty in charge
Dr. Vijutha Sunny
Department of Physics
Alphonsa College Pala



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फैक्स Fax: + 91 - 481 257 4751

ई मेल E-mail: woodlab@rubberboard.org.in

वेब Web: www.rubberboard.org.in

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

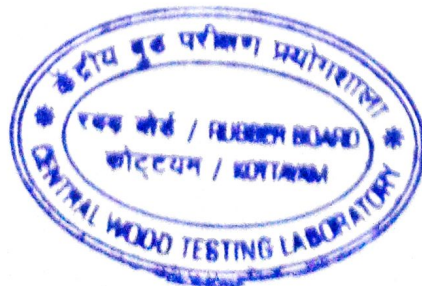
This is to certify that Kum. **JENNA GEORGE**, Reg No. **200021035674**, Third Year BSc. Physics, Alphonsa College, Pala, under M.G University has carried out the project work at The Central Wood Testing Laboratory, E&P Division, The Rubber Board, Manganam, Kottayam from 22nd December 2022 to 15th February 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 IMPACT OF DENSITY ON BENDING STRENGTH OF DIFFERENT WOOD SPECIES"

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)



PROJECT REPORT

Department of Physics

B. Sc Physics

2020-2023

STUDY ON IMPACT OF DENSITY ON BENDING STRENGTH OF DIFFERENT WOOD SPECIES

External Examiner:

[Handwritten signature]
03/05/2023

Internal Examiner:


[Handwritten signature]

Date of Evaluation:

8/5/2023

CERTIFICATE

This is to certify that the project entitled "STUDY ON IMPACT OF DENSITY ON BENDING STRENGTH OF DIFFERENT WOOD SPECIES" carried out by **Kum.HIMA R**, Reg No.**200021035689** ,of Alphonsa College Pala in the partial fulfilment of the requirement for the award of Bachelor of Science in Physics under Mahatma Gandhi University during the academic year 2020-23.


21/03/2023
Faculty in charge
Dr.Vijutha Sunny
Department of Physics
Alphonsa College Pala



दूरभाष Phone: + 91 - 481 257 7378

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ई मेल E-mail: woodlab@rubberboard.org.in

वेब Web: www.rubberboard.org.in

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. HIMA R Reg No.200021035689, 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 IMPACT OF DENSITY ON BENDING STRENGTH OF DIFFERENT WOOD SPECIES"

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

Page 1 of 1

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECT REPORT

Department of Physics

B. Sc Physics

2020-2023

STUDY ON IMPACT OF DENSITY ON BENDING STRENGTH OF DIFFERENT WOOD SPECIES

External Examiner:

A handwritten signature in green ink, appearing to be "Subing", written over a horizontal line.

Internal Examiner:


A handwritten signature in black ink, appearing to be "Rajesh", written over a horizontal line.

Date of Evaluation:

2/5/2023

CERTIFICATE

This is to certify that the project entitled "STUDY ON IMPACT OF DENSITY ON BENDING STRENGTH OF DIFFERENT WOOD SPECIES" carried out by Kum.**JINSHA JOSEPH** Reg No.**200021035676** ,of Alphonsa College Pala in the partial fulfilment of the requirement for the award of Bachelor of Science in Physics under Mahatma Gandhi University during the academic year 2020-23.


21/03/2023
Faculty in charge
Dr. Vijutha Sunny
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

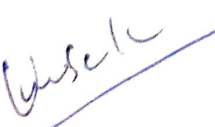
To whomsoever it may concern

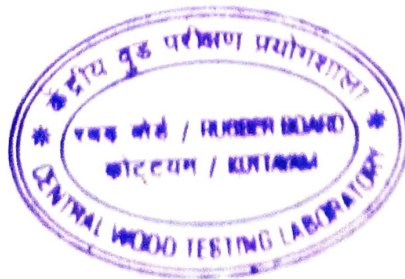
This is to certify that Kum. **JINSHA JOSEPH**, Reg No. **200021035676**, Third Year BSc. Physics, Alphonso College, Pala, under M.G University has carried out the project work at The Central Wood Testing Laboratory, E&P Division, The Rubber Board, Manganam, Kottayam from 22nd December 2022 to 15th February 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 IMPACT OF DENSITY ON BENDING STRENGTH OF DIFFERENT WOOD SPECIES”**

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

Duration: 22nd December 2022 to 15th February 2023

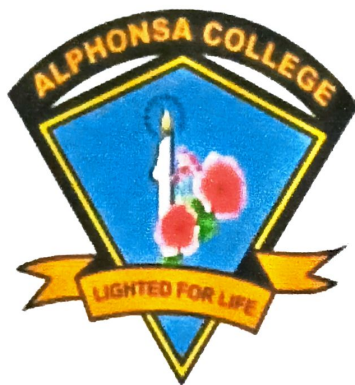

G.UMASANKAR
FM (P&M)&OIC




P.ARUMUGAM
JOINT DIRECTOR (P&QC)

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECT REPORT

Department of Physics

B.Sc Physics

2020-2023

STUDY ON DIFFERENT TYPES OF LDR BASED SECURITY SYSTEMS

External Examiner:

Subin
03/05/2023

[Signature]


Internal Examiner:

Date of Evaluation:

03/05/2023

CERTIFICATE

This is to certify that Ms. **JEWEL MICHEL**, Reg No.**200021035675** submitted this project entitled **“STUDY ON DIFFERENT TYPES OF LDR BASED SECURITY SYSTEMS”** as part of fulfilment of the requirements for the award of Degree of Bachelor of Science in Physics .


31/3/2023
Asst. Prof. Cincila T Joy
Project Guide



ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECT REPORT

Department of Physics

B.Sc Physics

2020-2023

STUDY ON DIFFERENT TYPES OF LDR BASED SECURITY SYSTEMS

External Examiner:

Subin
03/05/2023

Internal Examiner:

[Signature]

Date of Evaluation:

03/05/2023

CERTIFICATE

This is to certify that Ms. **JISSA BABY**, Reg No. **200021035677** submitted this project entitled **“STUDY ON DIFFERENT TYPES OF LDR BASED SECURITY SYSTEMS”** as part of fulfilment of the requirements for the award of Degree of Bachelor of Science in Physics .



Cincila T Joy
31/3/2023

Asst. Prof. Cincila T Joy

Project Guide

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



PROJECT REPORT

Department of Physics

B.Sc Physics

2020-2023

STUDY ON DIFFERENT TYPES OF LDR BASED SECURITY SYSTEMS

External Examiner: *Subudh*
25/08/2023

Internal Examiner: *[Signature]*

Date of Evaluation: *26/9/2023*

CERTIFICATE

This is to certify that Ms. **DILNA JAMES**, Reg No. **200021035688** submitted this project titled **“STUDY ON DIFFERENT TYPES OF LDR BASED SECURITY SYSTEMS”** as part of fulfilment of the requirements for the award of Degree of Bachelor of Science in Physics .



Dr. C. T. Joy
21/3/2023

Asst. Prof. Cincila T Joy

Project Guide

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Solar Energy and its Applications



Submitted by,

Name: Reema Rajendran

Course: B.Sc. Physics Model 1

Reg No: 200021015683

ALPHONSA COLLEGE, PALA

(Affiliated to Mahatma Gandhi University)



Solar Energy and its Applications

PROJECT REPORT 2020-2023

External examiner:

[Handwritten signature]
03/01/2023



Internal examiner:

[Handwritten signature]
22/01/2023

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 Reena Rajendran (200021035683) 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

