

VISION : Enlightenment Through Education,
Strength Through Organization.



SREE NARAYANA COLLEGE KANNUR

ACCREDITED BY NAAC WITH 'A' GRADE (AFFILIATED TO KANNUR UNIVERSITY)

Sree Narayana College Kannur, P.O. Thottada, Kannur, Kerala, India - 670 007

✉ sncollegekannur@gmail.com ☎ 0497 - 2731085

🌐 www.sncollegekannur.ac.in



PROJECT WORK- DEPARTMENT OF PHYSICS

**SREE NARAYANA COLLEGE
THOTTADA, KANNUR**



BONAFIDE CERTIFICATE

This is to certify that the work incorporated in the project entitled “**pH-Dependent Antibacterial Activity of ZnO Nanoparticles Synthesized via Microwave Irradiation: A Comparative Analysis**” submitted by **GOKUL PV** (Reg. No:SN21CPHR30) for the partial fulfilment of his B.Sc. Degree in Physics, at Sree Narayana College, Kannur during the academic year 2021-2024 comprises the results of the original research work done by the candidate under my guidance.

Examiners:

1)

2)

BIVITHA T K

Assistant Professor

Department of Physics
Sree Narayana College Kannur

Place: Kannur

Date: 22/2/2024

BIVITHA. T.K
Assistant Professor
Department of Physics
Sree Narayana College
Kannur- 670007



SREE NARAYANA COLLEGE, KANNUR
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that the project entitled “**A STUDY OF MAGNETIC HYSTERESIS LOOP AND ITS ENERGY LOSS**” is a bona fide record of work done and submitted by VAISHNAVI P V Reg. No: SN21CPHR45 in partial fulfilment for the award of the bachelor degree in physics, during the academic year 2021-24 of Kannur University.

TEACHER IN CHARGE

M Damodharan

HEAD OF THE DEPARTMENT



EXAMINERS

- 1.
- 2.

A STUDY OF MAGNETIC HYSTERESIS LOOP AND ITS ENERGY LOSS

DISSERTATION

Submitted to

KANNUR UNIVERSITY, KANNUR

IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF DEGREE OF BACHELOR
OF SCIENCE IN PHYSICS

Submitted by

VAISHNAVI P V

REG NO : SN21CPHR45



DEPARTMENT OF PHYSICS

SREE NARAYANA COLLEGE, KANNUR

MARCH 2024

Under the guidance of

MANOOB V J

Assistant Professor

DEPARTMENT OF PHYSICS

SREE NARAYANA COLLEGE, KANNUR

DECLARATION

I hereby declare that this project entitled **A STUDY OF HYSTERESIS LOOP AND ITS ENERGY LOSS** submitted to Kannur University in fulfilment of the requirements for the award of the Degree of the **BACHELOR OF SCIENCE IN PHYSICS** is a record of original work done by me under the guidance and supervision of Mr. **MANOOB V J**, Assistant Professor, **DEPARTMENT OF PHYSICS, SREE NARAYANA COLLEGE KANNUR**

VAISHNAVI P V

Place : Kannur

Date :

ACKNOWLEDGMENT

I wish to express my earnest gratitude to my supervising guide ASSISTANT PROFESSOR Mr. MANOOB V J for constant support and encouragement throughout my project work.

I sincerely thanking my supervising guide Mr. MANOOB V J who helped me in completing my project. I came to know about so many new things I am really thankful to them.

I would also like to extend my gratitude to all other faculty members of department of physics for providing me with all the facility that was required.

VAISHNAVI P V

**SREE NARAYANA COLLEGE
THIOTTADA, KANNUR**




BONAFIDE CERTIFICATE

This is to certify that the work incorporated in the project **SUGAR CONCENTRATION IN LIQUIDS** submitted by **SEETHALAKSHMI R** (Reg. No:SN21CPHR44) for the partial fulfilment of his B.Sc. Degree in Physics, at Sree Narayana College, Kannur during the academic year 2021-2024 comprises the results of the original research work done by the candidate under my guidance.

Examiners:

1)  17/3/24

2) 


Ms REMYAM

CERTIFICATE

This is to certify that the dissertation entitled "**DETERMINATION OF DYNAMICS OF SYSTEMS USING PHASE SPACE FORMULATION**" submitted to the Kannur university, in partial fulfillment of the requirements for the Bachelor of Science in Physics is a record of the original research work done by **RIYA RAGESH (Reg No.: SN21CPHR21)** during the period of her study in the Department of Physics of Sree Narayana College, Kannur.



Teacher in charge

VIPIN. V.K
Assistant Professor
Department of Physics
Sree Narayana College
Kannur - 670007

Place:

Date:

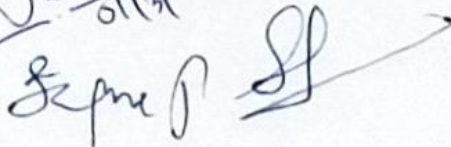
Examiners

1)



01/13/22

2



**SREE NARAYANA COLLEGE
THOTTADA, KANNUR**



BONAFIDE CERTIFICATE


This is to certify that the work incorporated in the project **SUGAR CONCENTRATION IN LIQUIDS** submitted by **VAISHNAV UMESH** (Reg. No:SN21CPHR33) for the partial fulfilment of his B.Sc. Degree in Physics, at Sree Narayana College, Kannur during the academic year 2021-2024 comprises the results of the original research work done by the candidate under my guidance.

Examiners:

1)


1/31/24

2)




Ms REMYA M



SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that the project entitled '**LASER SECURITY SYSTEM**' is bona fide record of work done by **VARNA M C Reg No. SN21CPHR46** department of physics, Sree Narayana College, Kannur submitted to the Kannur University towards the partial fulfillment of requirement for the award for Bachelor degree in physics during the period of 2021-2024.


TEACHER IN CHARGE

26/02/2024

M Janab KJ
Asst. Professor
Department of Physics


HEAD OF THE DEPARTMENT



EXAMINERS

1.

2.





SREE NARAYANA COLLEGE, KANNUR
DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that this project work entitled "DETERMINE THE THICKNESS OF HAIR OF ANIMALS AND COMPARE THEM BY OBSERVATION OF DIFFRACTION PATTERN" is a bona fide record of work carried out by **ANUSHA RAMESHAN, REG.NO.SN21CPHR13** final year B.Sc. physics, Department of Physics, Sree Narayana College, Kannur, submitted to the Kannur University towards the partial fulfilment of the requirements for the award of Degree of Bachelor of Science in Physics during the period of 2021-2024

TEACHER IN CHARGE

Examiners:

1.

2.

Place:

Date:

Head of the department

Department of Physics

PRASHANTH N
Assistant Professor & Head
Department of Physics
Sree Narayana College
Kannur - 670 007

**SREE NARAYANA COLLEGE
THOTTADA, KANNUR**



BONAFIDE CERTIFICATE

This is to certify that the work incorporated in the project entitled “**pH-Dependent Antibacterial Activity of ZnO Nanoparticles Synthesized via Microwave Irradiation: A Comparative Analysis**” submitted by **AMBILI KOLAKKODAN** (Reg. No:SN21CPHR39) for the partial fulfilment of his B.Sc. Degree in Physics, at Sree Narayana College, Kannur during the academic year 2021-2024 comprises the results of the original research work done by the candidate under my guidance.

Examiners:

1)

2)

OK Bivitha
29/2/24
BIVITHA T K

Assistant Professor
Department of Physics
Sree Narayana College Kannur

BIVITHA. T.K
Assistant Professor
Department of Physics
Sree Narayana College
Kannur- 670007

Place: Kannur
Date: 22/2/2024



**SREE NARAYANA COLLEGE KANNUR
DEPARTMENT OF PHYSICS**

CERTIFICATE

This is to certify that the project report entitled "KARNAUGHMAP-SOLVING FOR 5 & 6 VARIABLES" is a bonafide record of work done and submitted by **ATHIRA K** REG NO: **SN21CPHR16** in partial fulfillment for the award of the bachelor degree in physics ,during the academic year, 2021-24 of Kannur University.

TEACHER IN CHARGE

HEAD OF THE DEPARTMENT

REMYA KRISHNAN M
Assistant Professor & Head
Department of Physics
Sree Narayana College
Kannur - 670 007

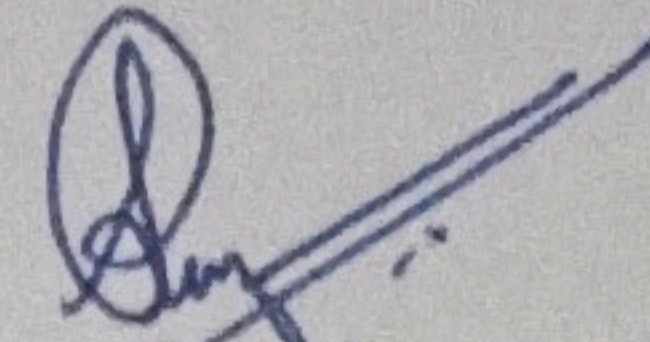
EXAMINERS

1.

2.

CERTIFICATE

This is to verify that this project report entitled **Determination of Specific Heat Capacity of Different Liquids By Newton's Law of Cooling** is a bonafide record of the work carried out by **Mr.ASHWANTH K Reg.No: SN21CPHR04**, SN College, Kannur, during VI Semester B.Sc. Physics in partial fulfillment for the award of 'Bachelor of Science' degree in physics. This work is done under my guidance and supervision.



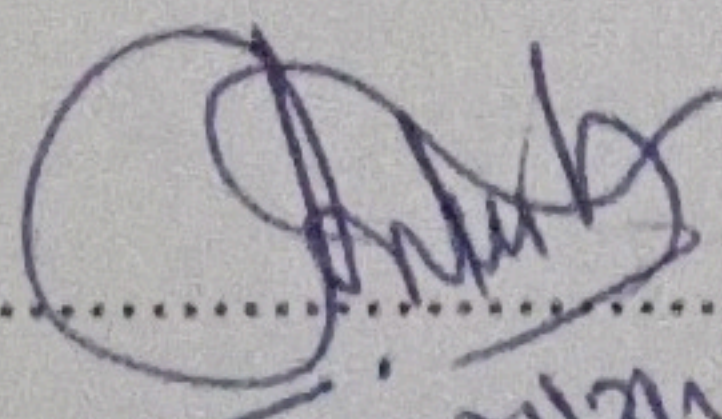
Teacher in charge

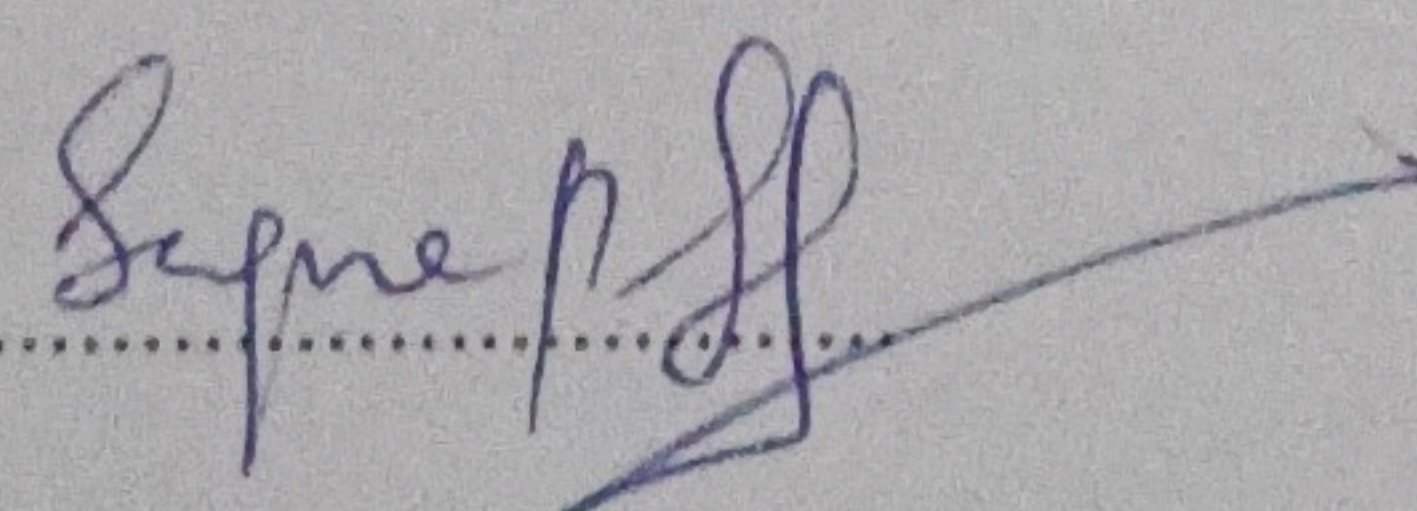
REMYA KRISHNAN M
Assistant Professor & Head
Department of Physics
Sree Narayana College
Kannur - 670 007

Submitted to the Kannur university, Kannur at the viva-voce

Examination held on

Sign of the external examiners:

1: 
21/3/2024

2: 



**SREE NARAYANA COLLEGE
KANNUR**

DEPARTMENT OF PHYSICS

CERTIFICATE

This is to certify that the project entitled "HALL EFFECT DETERMINATION OF HALL COEFFICIENT AND CARRIER CONCENTRATION" is a bonafide work done and submitted by **AKSHARA K**, Reg. No. **SN21CPHR38** in partial fulfillment for the award of the B.Sc. Degree in Physics, during the academic year, 2023-24 of Kannur University, Kannur.

H. Rashida
23/02/24.

PROJECT GUIDE

RASHIDA T.N.K

RASHIDA. T.N.K
Assistant Professor
Department of Physics
Sree Narayana College
Kannur - 670007

HEAD OF DEPARTMENT

REMYA KRISHNAN

REMYA KRISHNAN M
Assistant Professor & Head
Department of Physics
Sree Narayana College
Kannur - 670 007

Examiners

1.

2.

SREE NARAYANA COLLEGE
THOTTADA, KANNUR



BONAFIDE CERTIFICATE

This is to certify that the work incorporated in the project entitled “**STRUCTURAL, OPTICAL AND NONLINEAR PROPERTIES OF ZnO NANOPARTICLE**” submitted by **UNNIMAYA K** (Reg. No: C2PSPH1115) for the partial fulfilment of her M.Sc. Degree in Physics, at Sree Narayana College, Kannur during the academic year 2022 to 2024 comprises the results of the original research work done by the candidate under my guidance.


MANOOB V.J



Assistant Professor

Department of Physics

Sree Narayana College

Kannur

Examiners:

- 1) N. Lavanya 
- 2) Sanitha A. S 

Place: Kannur

Date:

BONAFIDE CERTIFICATE

This is to certify that the project work entitled "*Green synthesis of cobalt oxide and Iron Doped Cobalt Oxide nanoparticles for Photo-catalytic degradation studies of Methyleneblue, Crystal violet and Congo red dyes*" done by **GOUTHAM DIVAKAR .K** Reg no. **C2PSPH1103**, PG Department of Physics, Sree Narayana College, Kannur submitted to Kannur University for the partial fulfilment for the award of the **DEGREE OF MASTER OF SCIENCE IN PHYSICS** during the academic year 2022-2024.

Signature of guide 1.

Aparna. N.
Assistant Professor
PG Dept. of Chemistry
Sree Narayana College
Kannur - 670 007

2.

Signature of Head of the Department:

Signature of External Examiner:

1) N. Lavanya

2) Sowitha .A



CERTIFICATE

This is to certify that the project entitled "QUANTUM INSIGHTS: INTERPRETATIONS AND EXPERIMENTS" is the bonafide work done by AKSHAYA V (REG. NO. C2PSPH1104), Department of Physics, Sree Narayana College, Kannur, submitted to Kannur University, in partial fulfilment of the requirement for the award of degree of Master of Science in Physics during the academic year 2022-2024.

Signature of Guide: 1.

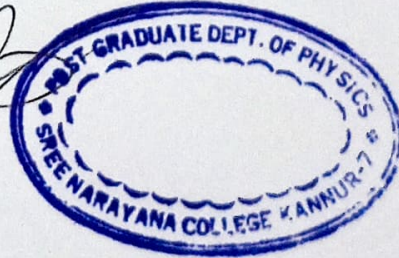
Sreshma Rajan
24/6/2024

2.

SRESHMA RAJAN
ASSISTANT PROFESSOR
OF DEPARTMENT OF PHYSICS
SREE NARAYANA COLLEGE
THOTTADA, KANNUR - 670 007

signature of Head of the Department:

Sreshma Rajan



signature of the External Examiner:

DN. Lavanya *[Signature]*

2) *Banitha A* *[Signature]*

SREE NARAYANA COLLEGE
THOTTADA, KANNUR



BONAFIDE CERTIFICATE

This is to certify that the work incorporated in the project entitled "**PHOTOCATALYTIC ACTIVITY OF ZINC OXIDE AND SAMARIUM-DOPED ZINC OXIDE UNDER SOLAR IRRADIATION: A COMPARATIVE STUDY**" submitted by SHIMA C (Reg. No: C2PSPH1113) for the partial fulfilment of her M.Sc. Degree in Physics, at Sree Narayana College, Kannur during the academic year 2022 to 2024 comprises the results of the original research work done by the candidate under my guidance.

JK Bivitha
14/6/24
BIVITHA T K

BIVITHA.T.K
Assistant Professor
Department of Physics
Sree Narayana College
Kannur-670007
Kannur

Examiners:

- 1) N. Lavanya *[Signature]*
- 2) Sanjitha A. Ball *[Signature]*

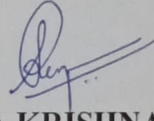
Place: Kannur

Date: 14-06-2024

CERTIFICATE

This is to certify that the dissertation entitled "STUDY ON THE STRUCTURAL AND OPTICAL PROPERTIES OF ZIRCONIUM DOPED CERIUM OXIDE NANOPARTICLES" submitted to the Kannur University, in partial fulfilment of the requirements for the degree of Master of Science in Physics, is a record of the original research work done by ANUSREE A (Reg. No.:C2PSPH1108) under my guidance during the period of her study in the Department of Physics of Sree Narayana College, Kannur.

Teacher in charge



REMYA KRISHNAN M

Assistant Professor

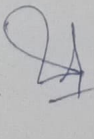
Department of Physics

Sree Narayana College, Kannur

Place: Kannur

Date:

Examiners:

1.) N. Lavanya 

2.) Samitha A 