



SHRIMATI INDIRA GANDHI COLLEGE

(Nationally Accredited at “A” Grade (3rd Cycle) by NAAC)

Chatram Bus Stand, Tiruchirappalli – 620002.

1.3.2

Supporting Document for Project work

Physics

Dr.K.SUJATHA, M.Sc., M.Phil., Ph.D.,
Assistant Professor, Department of Physics,
Shrimati Indira Gandhi College,
Trichy-2.

CERTIFICATE

This is to certify that this report entitled, "A STUDY OF OPTICAL ACTIVITY OF AQUEOUS SOLUTIONS OF LACTOSE AND ARGININE" is submitted in partial fulfillment for the MASTER OF SCIENCE IN PHYSICS, at Shrimati Indira Gandhi College, Tiruchirappalli affiliated to Bharathidasan University. It is further certified that it is a bonafide record of the project carried out by Miss. K.AKILANDASWARI Reg. No. P20201401 under my supervision and guidance.

K. Sujatha
Signature of the Internal Guide

J. K. K.
Signature of the Head of
the department

Signature of the External Examiner

S. P.
3/6/2022
CDR. S. PARV



Dr. S. VIDHYA., M.Sc., M.Phil., PGDCA
Assistant Professor, Department of Physics
Shrimati Indira Gandhi College
Tiruchirapalli-620 002.


CERTIFICATE

I here certify that the project work entitled “**GROWTH AND CHARACTERIZATION OF GEL GROWN AMMONIUM STRONTIUM MIXED TARTRATE CRYSTALS**” submitted to **BHARATHIDASAN UNIVERSITY** in **APRIL 2022** in partial fulfillment for the award of the degree of **MASTER OF SCIENCE IN PHYSICS**, is the work of **A.AMUTHA (P 20201402)** carried out under my supervision during the academic period 2020-2022.


Signature of

Head of the department

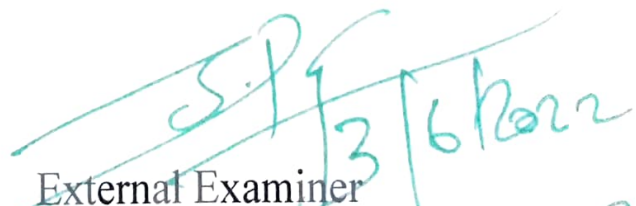
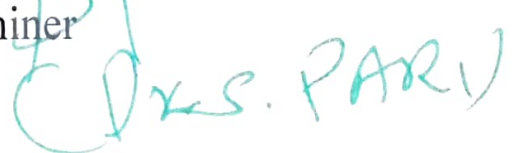
(Dr.S.SANTHAKUMARI)


Signature of the guide

Dr.S.Vidhya

Date:



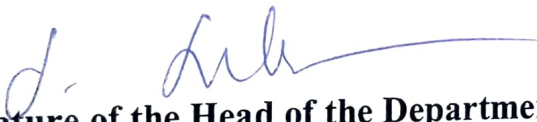

External Examiner



 S.VIDHYA

Dr. S.SANTHAKUMARI, M.Sc., M.Phil., B.Ed., Ph.D.,
HEAD, ASSISTANT PROFESSOR,
DEPARTMENT OF PHYSICS,
SHRIMATI INDIRA GANDHI COLLEGE,
TIRUCHIRAPALLI – 620 002.


CERTIFICATE

This is to certify that the dissertation entitled
“**VISCOMETRIC AND ACOUSTICAL PARAMETERS OF
DISACCHARIDES IN AQUEOUS MEDIUM**” submitted by
R.ASWINI (Reg.No. P 20201404) In partial fulfillment of the
requirement for the award of the degree of **MASTER DEGREE IN
PHYSICS** for the academic year 2021-2022 has been done under my
guidance.

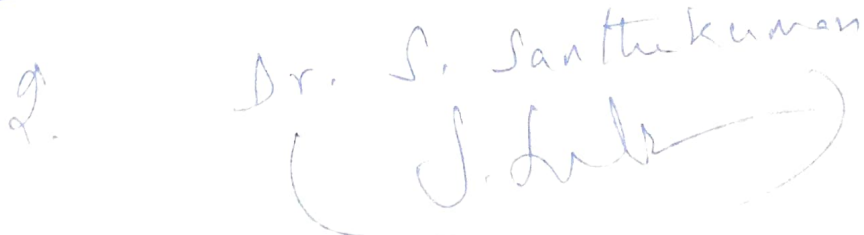
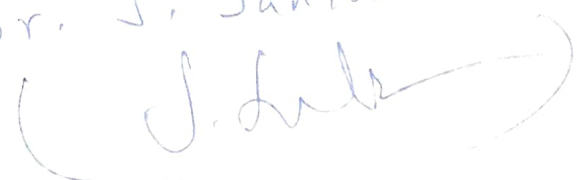

Signature of the Head of the Department
(Dr. S.SANTHAKUMARI)


Signature of the guide
(Dr.S.SANTHAKUMARI)




3/6/2022

Signature of the External Examiner
Dr. S. PARI


Dr. S. Santhakumari
()

Dr.A.ANGELIN PREMA, M.Sc., M.Phil. B.Ed.,Ph.D.,

ASSISTANT PROFESSOR,

DEPARTMENT OF PHYSICS,

SHRIMATI INDIRA GANDHI COLLEGE,

TIRUCHIRAPALLI-620 002.

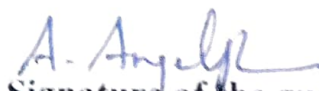
CERTIFICATE

This is to certify that the dissertation entitle "**STUDY OF ANTIOXIDANT STABILITY IN EDIBLE OIL USING PARAMETERS.**" Submitted to **BHARATHIDASAN UNIVERSITY**, In partial fulfillment of the requirement for the degree of **MASTER OF SCIENCE IN PHYSICS** is a record of original work done by **A.BRISCILLA MADONA (REGISTER. NO. P 20201406)** Under my guidance and that this project work has not formed the basis for the award of any degree diploma/associate/fellowship or similar title to any candidate of any university.



Signature of the head of the department

(Dr.S.SANTHAKUMARI)

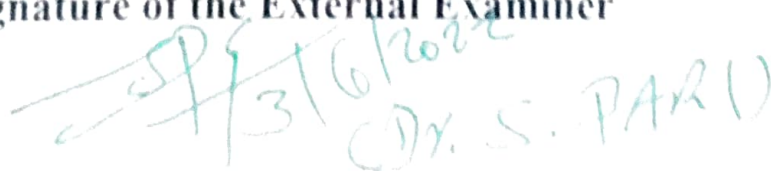


Signature of the guide

(Dr.A.ANGELIN PREMA)



Signature of the External Examiner



SPS/3/6/2022
Dr. S. PARVATHI



Dr, Mrs, N. SHARMILA, M.Sc., M.Phil., Ph.D.,

ASSISTANT PROFESSOR,

DEPARTMENT OF PHYSICS,

SHRIMATI INDIRA GANDHI COLLEGE,

TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitles “**MOLECULAR STRUCTURE AND DRUGLIKENESS OF QUINOLINE DERIVATIVES**” submitted to BHARATHIDASAN UNIVERSITY, in partial fulfilment of the requirement for the degree of Master of Science in Physics is a record of original work done by **A.HARINI (Reg. No. P 20201407)** under my guidance and that this project work has not formed the basis for the award of any degree diploma/associate/fellowship or similar tittle to any candidate of any university.

S.P.F.
3/6/22

Signature of the External Examiner

N.S.H.
Signature of the guide



S. S. Santhakumari
Signature of the Head of the Department

(Dr. S.SANTHAKUMARI)

Mrs. V. VIJAYA M.Sc., M. Phil., PGDCA.,

Assistant professor in physics,
Department of physics,
Shrimati Indira Gandhi College,
Tiruchirappalli - 620 002.

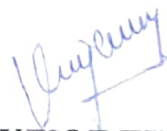
CERTIFICATE

This is to certify that this project report entitled “**FTIR SPECTRAL ANALYSIS ON SOME DIABETES DRUGS**” Submitted by R. HETCY JOVITTA (Reg. No: P 20201408) partial Fulfilment of the requirements for the award of the **MASTER DEGREE IN PHYSICS** for the academic year 2020-20 22 has been done under my guidance.



**SIGNATURE OF THE HEAD
THE DEPARTMENT**

(Dr. S. SANTHA KUMARI)



SIGNATURE OF THE GUIDE

(V. VIJAYA)



EXTERNAL EXAMINER

SPF
3/6/2022
Dr. S. PARVATHI

Dr. Mrs. N. SHARMILA, M.Sc., M.Phil., Ph.D.,
ASSISTANT PROFESSOR,
DEPARTMENT OF PHYSICS,
SHRIMATI INDIRA GANDHI COLLEGE,
TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitles “ **STRUCTURAL AND DRUGLIKENESS ANALYSIS OF BENZOFURAN DERIVATIVES**” submitted to BHARATHIDASAN UNIVERSITY, in partial fulfillment of the requirement for the degree of Master of Science in Physics is a record of original work done by **M.JANANI (Reg. No. P 20201410)** under my guidance and that this project work has not formed the basis for the award of any degree diploma/associate/fellowship or similar title to any candidate of any university.

S.P.
3/6/2022

Signature of the External Examiner

Nishu

Signature of the guide

S. Santhakumari

Signature of the Head of the Department


(Dr. S.SANTHAKUMARI)




Dr. S.SANTHAKUMARI, M.Sc., M.Phil., B.Ed., Ph.D.,
HEAD, ASSISTANT PROFESSOR,
DEPARTMENT OF PHYSICS,
SHRIMATI INDIRA GANDHI COLLEGE,
TIRUCHIRAPALLI – 620 002.

CERTIFICATE

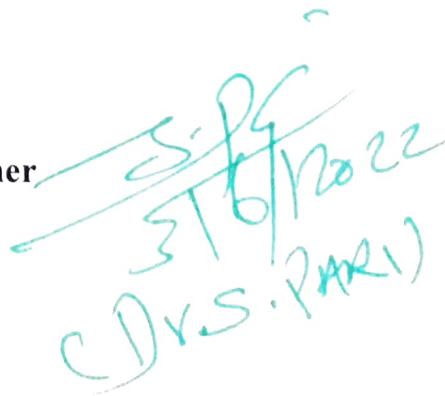
This is to certify that the dissertation entitled “INTERMOLECULAR INTERACTIONS OF CCL₄ AND NaCl USING ULTRASONIC VELOCITY” submitted by T.KALPANA (Reg.No. P20201411) In partial fulfillment of the requirement for the award of the degree of MASTER DEGREE IN PHYSICS for the academic year 2021-2022 has been done under my guidance.


Signature of the Head of the Department


Signature of the guide
(Dr. S.SANTHAKUMARI)



Signature of the External Examiner


31/6/2022
(Dr. S. PARI)

Dr, Mrs, N. SHARMILA, M.Sc., M.Phil., Ph.D.,

ASSISTANT PROFESSOR,

DEPARTMENT OF PHYSICS,


SHRIMATI INDIRA GANDHI COLLEGE,

TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitles “ **STRUCTURAL AND DRUGLIKENESS ANALYSIS OF ACRYLAMIDE DERIVATIVES**” submitted to BHARATHIDASAN UNIVERSITY, in partial fulfilment of the requirement for the degree of Master of Science in Physics is a record of original work done by **S.KIRUTHIGA (Reg. No. P 20201412)** under my guidance and that this project work has not formed the basis for the award of any degree diploma/associate/fellowship or similar title to any candidate of any university.


Signature of the External Examiner


Signature of the guide




Signature of the Head of the Department

(Dr. S.SANTHIKUMARI)

Dr, Mrs, N. SHARMILA, M.Sc., M.Phil., Ph.D.,

ASSISTANT PROFESSOR,

DEPARTMENT OF PHYSICS,

SHRIMATI INDIRA GANDHI COLLEGE,

TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitles “ **DRUGLIKENESS AND MOLECULAR STRUCTURE ANALYSIS OF PYRAN DERIVATIVES**” submitted to BHARATHIDASAN UNIVERSITY, in partial fulfillment of the requirement for the degree of Master of Science in Physics is a record of original work done by **M.KIRTHIKA (Reg. No. P 20201413)** under my guidance and that this project work has not formed the basis for the award of any degree diploma/associate/fellowship or similar title to any candidate of any university.


Signature of the External Examiner


Signature of the guide




Signature of the Head of the Department

(Dr. S.SANTHAKUMARI)

Dr. S.SANTHAKUMARI, M.Sc., M.Phil., B.Ed., Ph.D.,

HEAD, DEPARTMENT OF PHYSICS,

SHRIMATI INDIRA GANDHI COLLEGE,

TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitle “**VISCOMETRIC AND ACOUSTICAL PARAMETERS OF VEGETABLE OILS USING ULTRASONIC VELOCITY**” submitted to BHARATHIDASAN UNIVERSITY, by **S.LAVANYA (Reg. No. P20201415)** In partial fulfillment of the requirement for the award of the degree of **MASTER DEGREE IN PHYSICS** for the academic year 2021-2022 has been done under my guidance.



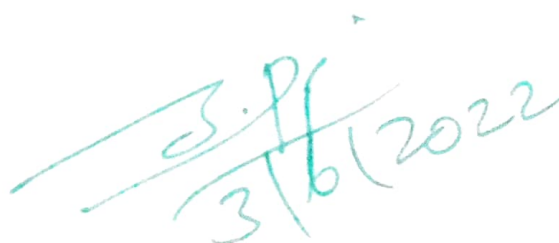
Signature of the Head of the Department

(Dr. S.SANTHAKUMARI)



Signature of the guide

(Dr.S.SANTHAKUMARI)



Signature of the External Examiner




Dr.S.VIDHYA,
Assistant Professor,
Department of Physics,
Shrimati Indira Gandhi College,
Trichy -620002.

CERTIFICATE

I here certify that the project work entitled "**GROWTH AND CHARACTERIZATION OF GEL GROWN AMMONIUM POTASSIUM MIXED TARTRATES CRYSTALS**" submitted to **BHARATHIDASAN UNIVERSITY** in **APRIL 2022** in partial fulfillment for the award of the degree of **MASTER OF SCIENCE IN PHYSICS**, is the work of **J.Leelavathi (P20201416)** carried out under my supervision during the academic period (2020-2022).


Signature of

Head of the department
(Dr.S.SANTHAKUMARI)

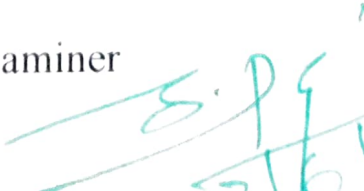


Signature of the Guide

Dr.S.Vidhya

External Examiner

Date:

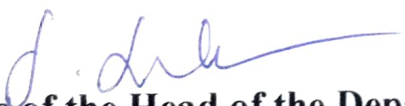




3/6/2022
Dr. S. PARU

05/10/22

Dr. S.SANTHAKUMARI, M.Sc., M.Phil., B.Ed., Ph.D.,
HEAD, ASSISTANT PROFESSOR,
DEPARTMENT OF PHYSICS,
SHRIMATI INDIRA GANDHI COLLEGE,
TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitled **“PHYSICOCHEMICAL STUDIES ON DISACCHARIDES IN AQUEOUS MEDIA AT DIFFERENT TEMPERATURES”** submitted by **B.V.LEKHA (Reg.No. P20201417)** In partial fulfillment of the requirement for the award of the degree of **MASTER DEGREE IN PHYSICS** for the academic year 2021-2022 has been done under my guidance.


Signature of the Head of the Department
(Dr.S.SANTHAKUARI)


Signature of the guide
(Dr.S.SANTHAKUMARI)




Signature of the External Examiner

Dr. M. Padmavathy M.Sc.,M.Phil.,PGDCA.,Ph.D

Assistant professor in physics,


Department of Physics,

Shrimati Indira Gandhi College,

Thiruchirapalli-620 002

CERTIFICATE

This is to certify that this project report entitled “**VIBRATIONAL SPECTROSCOPY ANALYSIS OF m (TRIFLUROMETHYL) PHENYL ACETONITRILE**” submitted by **M. MAHALAKSHMI** Reg.No.P20201418 Partial Fullfillment of the requirements for the award of the **MASTER OF DEGREE IN PHYSICS** for the academic year 2021- 2022 has been done under my guidance.


**SIGNATURE OF THE HEAD
DEPARTEMENT**

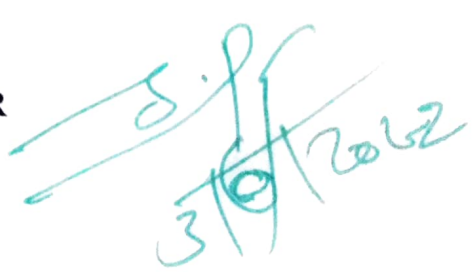
(Dr.S.SANTHAKUMARI)


**SIGNATURE OF THE
GUIDE**

(Dr.M.PADMAVATHY)



EXTERNAL EXAMINER


3/10/2022

Dr.K.SUJATHA, M.Sc., M.Phil., Ph.D.,
Assistant Professor, Department of Physics,
Shrimati Indira Gandhi College,
Trichy-2.

CERTIFICATE

This is to certify that this report entitled, **“OPTICAL ACTIVITY STUDY OF AMINO ACIDS AND INVERT SUGAR IN WATER”** is submitted in partial fulfillment for the **MASTER OF SCIENCE IN PHYSICS**, at Shrimati Indira Gandhi College, Tiruchirappalli affiliated to Bharathidasan University. It is further certified that it is a bonafide record of the project carried out by Miss.**M.MAHALAKSHMI** Reg.No. **P20201419** under my supervision and guidance.

K. Sujatha
Signature of the Internal Guide

J. Delli
Signature of the Head of
the department

S.P.F.
Signature of the External Examiner
3/6/2022




Dr. S.SANTHAKUMARI, M.Sc., M.Phil.,B.Ed., Ph.D.,
HEAD & ASSISTANT PROFESSOR,
DEPARTMENT OF PHYSICS,
SHRIMATI INDIRA GANDHICOLLEGE,
TIRUCHIRAPALLI-620 002

CERTIFICATE

This is to certify that the dissertation entitled“ **DENSITY, VISCOSITY AND SURFACE TENSION OF EDIBLE OILS AT DIFFERENT TEMPERATURES**” submitted by **M.MANKESH** (Reg.No.P 20201421) in partial fulfilment of the requirement for the award of the degree of **MASTER DEGREE IN PHYSICS** for the academic year 2020-2022 has been done under my guidance.


Signature of the Head of the Department

(Dr. S.SANTHAKUMARI)


Signature of the guide

(Dr.S.SANTHAKUMARI)




Signature of the External Examiner

3.6.22

Dr. K. SUJATHA., M.Sc., M.Phil., Ph.D.,

Assistant Professor in physics

Department of Physics,

Shrimati Indira Gandhi College,

Trichy- 620 002.

CERTIFICATE

This is to certify that this report entitled, “**A STUDY OF OPTICAL ACTIVITY OF A SUGAR, AN AMINO ACID AND ACOUSTICAL ANALYSIS OF GLUCOSE**” is submitted in partial fulfillment for the **MASTER OF SCIENCE IN PHYSICS**, at Shrimati Indira Gandhi College, Tiruchirappalli affiliated to Bharathidasan University. It is further certified that it is a bonafide record of the project carried out by Miss. **M. PANDISELVI Reg. No. P20201422** under my supervision and guidance.

K. Sujatha

Signature of the Internal Guide

J. M.

**Signature of the Head of the
Department**

S. K. S. 3.6.22
Signature of the External Examiner



Dr. M. Padmavathy M.Sc.,M.Phil.,PGDCA.,Ph.D

Assistant professor in physics,

Department of Physics,

Shrimati Indira Gandhi College,

Thiruchirapalli-620 002.

CERTIFICATE

This is to certify that this project report entitled “**FTIR AND FT RAMAN STUDIES OF P-CHLORONITROBENZENE USING DENSITY FUNCTIONAL THEORY**” submitted by **B.PETRICIA**

Reg.No.**P20201424** Partial Fullfillment of the requirements for the award of the **MASTER OF DEGREE IN PHYSICS** for the academic year 2021-2022 has been done under my guidance



SIGNATURE OF THE HEAD

OF THE DEPARTEMENT

(Dr.S.SANTHAKUMARI)



SIGNATURE OF THE

GUIDE

(Dr.M.PADMAVATHY)



3-6-22
EXTERNAL EXAMINER

Mrs.A. ANITHA EZHIL MANGAIYARKARASI, M.Sc., M.Phil.,
ASSISTANT PROFESSOR,
DEPARTMENT OF PHYSICS,
SHRIMATI INDIRA GANDHI COLLEGE,
TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitles "CHARACTERIZATION OF SPRAY DEPOSITED CADMIUM DOPED ZnO THIN FILMS" submitted to BHARATHIDASAN UNIVERSITY, in partial fulfillment of the requirement for the degree of Master of Science in Physics is a record of original work done by R.PRIYADHARSHINI (Reg. No. P 20201427) under my guidance and that this project work has not formed the basis for the award of any degree diploma/associate/fellowship or similar title to any candidate of any university.



Signature of the head of the department

[Dr.S.SANTHAKUMARI]



Signature of the guide

[Mrs.A.ANITHA EZHIL
MANGAIYARKARASI]





3.6.22
Signature of the External Examiner

Dr. S.SANTHAKUMARI, M.Sc., M.Phil., B.Ed., Ph.D.,
HEAD, ASSISTANT PROFESSOR,
DEPARTMENT OF PHYSICS,
SHRIMATI INDIRA GANDHI COLLEGE,
TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitled **“ULTRASONIC STUDY OF MOLECULAR INTERACTIONS OF PURE COMPOUNDS IN AQUEOUS MEDIUM”** submitted by **M.RAMYA (Reg.No. P20201428)** In partial fulfillment of the requirement for the award of the degree of **MASTER DEGREE IN PHYSICS** for the academic year 2021-2022 has been done under my guidance.


**Signature of the Head of the
Department**


**Signature of the guide
(Dr.S.SANTHAKUMARI)**


Signature of the External Examiner



Dr.S.VIDHYA, M.Sc.,M.Phil.
Assistant Professor,
Department of Physics,
Shrimati Indira Gandhi College,
Trichy-2.

CERTIFICATE

I here certify that the project work entitled “**GROWTH AND CHARACTERIZATION OF GEL GROWN POTASSIUM COPPER MIXED TARTRATE CRYSTALS**” submitted to **BHARATHIDASAN UNIVERSITY** in **JUNE 2022** in partial fulfillment for the award of the degree of **MASTER OF SCIENCE IN PHYSICS**, is the work of **R.SANTHOSHINI (P 20201429)** carried out under my supervision during the academic period 2020 - 2022.



Signature of

Head of the department

Dr. S.SANTHAKUMARI,



Signature of the Guide

Dr.S.VIDHYA,



External Examiner

Date: 03/06/2022

Dr.S.Vidhya,
Assistant Professor,
Department of Physics,
Shrimati Indira Gandhi College,
Trichy-2.

CERTIFICATE

I here certify that the project work entitled “**GROWTH AND CHARACTERIZATION OF THIOUREA DOPED SODIUM POTASSIUM TARTRATE TETRAHYDRATE**” submitted to BHARATHIDASAN UNIVERSITY in APRIL 2022 in partial fulfillment for the award of the degree of **MASTER OF SCIENCE IN PHYSICS**, is the work of **B.SHANMUGAPRIYA (P20201430)** carried out under my supervision during the academic period 2020-2022.


Signature of

Head of the department
(Dr.S.SANTHAKUMARI)


Signature of the Guide

Dr.S.VIDHYA


External Examiner 3.6.22




Date: 03.06.2022


Dr, Mrs, N. SHARMILA, M.Sc., M.Phil., Ph.D.,
ASSISTANT PROFESSOR,
DEPARTMENT OF PHYSICS,
SHRIMATI INDIRA GANDHI COLLEGE,
TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitles
“MOLECULAR STRUCTURE AND DRUGLIKENESS
EVALUATION OF ANILINE DERIVATIVES” submitted to
BHARATHIDASAN UNIVERSITY, in partial fulfilment of the
requirement for the degree of Master of Science in Physics is a
record of original work done by **S.SHARMILA**
(Reg. No. P 20201431) under my guidance and that this project
work has not formed the basis for the award of any degree
diploma/associate/fellowship or similar title to any candidate of any
university.


Signature of the External Examiner


Signature of the
guide


Signature of the Head of the Department
(Dr. S. SANTHAKUMARI)



Dr. K. SUJATHA, M.Sc., M.Phil., Ph.D.,
Assistant Professor, Department of Physics,
Shrimati Indira Gandhi College,
Trichy-2.

CERTIFICATE

This is to certify that this report entitled, "OPTICAL ACTIVITY STUDY OF SUCROSE, LYSINE AND ACOUSTICAL ANALYSIS OF SUCROSE" is submitted in partial fulfillment for the MASTER OF SCIENCE IN PHYSICS, at Shrimati Indira Gandhi College, Tiruchirappalli affiliated to Bharathidasan University. It is further certified that it is a bonafide record of the project carried out by Miss. V.SUBALAKSHMI Reg. No. P20201432 under my supervision and guidance.

K. Sujatha
Signature of the Internal Guide

S. M. C.
Signature of the Head of
the department

M. K. S. 3.6.12
Signature of the External Examiner



Dr.S.VIDHYA, M.Sc.,M.Phil.
Assistant Professor,
Department of Physics,
Shrimati Indira Gandhi College,
Trichy-02.

CERTIFICATE

I here certify that the project work entitled “**GROWTH AND CHARACTERIZATION OF GEL GROWN POTASSIUM STRONTIUM MIXED TARTRATE CRYSTALS**” submitted to BHARATHIDASAN UNIVERSITY in APRIL 2022 in partial fulfillment for the award of the degree of **MASTER OF SCIENCE IN PHYSICS**, is the work of **R.SUBASHINI (P 20201433)** carried out under my supervision during the academic period 2020-2022.



Signature of

Head of the department

Dr.S.SANTHAKUMARI,



Signature of the

Guide

Dr.S.VIDYA



Date: 3.6.22



3.6.22
External Examiner

Dr. M. Padmavathy M.Sc.,M.Phil.,PGDCA.,Ph.D

Assistant professor in physics,

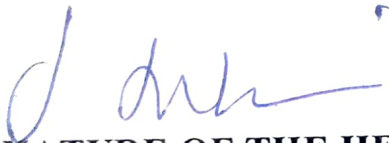
Department of Physics,


Shrimati Indira Gandhi College,

Thiruchirapalli-620 002

CERTIFICATE

This is to certify that this project report entitled **“VIBRATIONAL SPECTROSCOPIC STUDIES OF METHYL FLURO NITRO BENZENE”** submitted by **B. SUMITHRA** Reg. No. **P20201434** Partial Fullfillment of the requirements for the award of the **MASTER OF DEGREE IN PHYSICS** for the academic year 2021-2022 has been done under my guidance.


**SIGNATURE OF THE HEAD
DEPARTEMENT**


**SIGNATURE OF THE OF THE
GUIDE**

(Dr. S. SANTHAKUMARI)

(Dr.M.PADMAVATHY)




EXTERNAL EXAMINER

Dr, Mrs, N. SHARMILA, M.Sc., M.Phil., Ph.D.,

ASSISTANT PROFESSOR,


DEPARTMENT OF PHYSICS,


SHRIMATI INDIRA GANDHI COLLEGE,

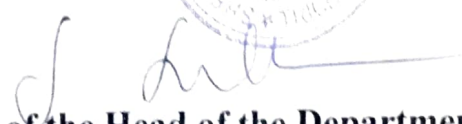
TIRUCHIRAPALLI – 620 002.

CERTIFICATE

This is to certify that the dissertation entitles “ **STRUCTURAL FEATURES AND DRUGLIKENESS OF ISATIN DERIVATIVES**” submitted to BHARATHIDASAN UNIVERSITY, in partial fulfilment of the requirement for the degree of Master of Science in Physics is a record of original work done by **K.VIDHYA (Reg. No. P 19201135)** under my guidance and that this project work has not formed the basis for the award of any degree diploma/associate/fellowship or similar title to any candidate of any university.


Signature of the External Examiner


Signature of the guide


Signature of the Head of the Department

(Dr. S.SANTHAKUMARI)

Dr. M. Padmavathy M.Sc.,M.Phil.,PGDCA.,Ph.D

Assistant professor in physics,

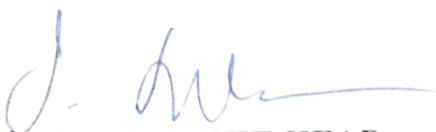
Department of Physics,

Shrimati Indira Gandhi College,

Thiruchirapalli-620 002

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This is to certify that this project report entitled “**FTIR AND FT RAMAN STUDIES OF BROMO NITRO BENZENE**” submitted by **S. VAISHNAVI** Reg.No.**P20201436** Partial Fullfillment of the requirements for the award of the **MASTER OF DEGREE IN PHYSICS** for the academic year 2021-2022 has been done under my guidance.



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DEPARTMENT**

(Dr.S.SANTHAKUMARI)



**SIGNATURE OF THE
GUIDE**

(Dr.M.PADMAVATHY)




EXTERNAL EXAMINER

Mrs.A. ANITHA EZHIL MANGAIYARKARASI, M.Sc., M.Phil.,
ASSISTANT PROFESSOR,
DEPARTMENT OF PHYSICS,
SHRIMATI INDIRA GANDHI COLLEGE,
TIRUCHIRAPALLI – 620 002.

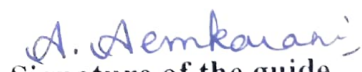
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This is to certify that the dissertation entitles “PREPARATION AND CHARACTERIZATION OF ZINC SULPHIDE THIN FILMS BY SPRAY PYROLYSIS TECHNIQUE” submitted to BHARATHIDASAN UNIVERSITY, in partial fulfillment of the requirement for the degree of Master of Science in Physics is a record of original work done by B.VIJI (Reg. No. P 20201437) under my guidance and that this project work has not formed the basis for the award of any degree diploma/associate/fellowship or similar title to any candidate of any university.



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[Dr.S.SANTHAKUMARI]



Signature of the guide

[Mrs.A.ANITHA EZHIL
MANGAIYARKARASI]



Signature of the External Examiner 3.5.22.

Dr. S.SANTHAKUMARI, M.Sc., M.Phil., B.Ed., Ph.D.,

HEAD, ASSISTANT PROFESSOR,


DEPARTMENT OF PHYSICS,


SHRIMATI INDIRA GANDHI COLLEGE,

TIRUCHIRAPALLI – 620 002.

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This is to certify that the dissertation entitled “**ULTRASONIC INVESTIGATION OF ION-SOLVENT INTERACTIONS OF DRUG IN AQUEOUS MEDIUM**” submitted by **K.VISHALI** (Reg.No. **P20201438**) In partial fulfillment of the requirement for the award of the degree of **MASTER DEGREE IN PHYSICS** for the academic year 2020-2022 has been done under my guidance.


Signature of the Head of the Department
(Dr. S.SANTHAKUMARI)


Signature of the guide
(Dr.S.SANTHAKUMARI)



 3-6-22
Signature of the External Examiner

Mrs. V. VIJAYA M.Sc., M. Phil., PGDCA.,

Assistant professor in physics,

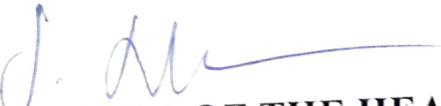
Department of physics,

Shrimati Indira Gandhi College,


Tiruchirappalli - 620 002.

CERTIFICATE

This is to certify that this project report entitled **“FTIR SPECTRAL ANALYSIS OF DENTIFRICE AGENTS”** Submitted by **P.YAMUNA NAYAKI** (Reg. No: P 20201439) partial Fulfilment of the requirements for the award of the **MASTER DEGREE IN PHYSICS** for the academic year 2020-2022 has been done under my guidance.


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OF THE DEPARTMENT**

(Dr. S. SANTHAKUMARI)


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(V. VIJAYA)



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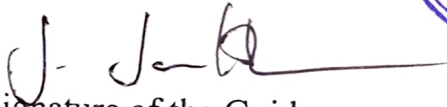
Dr.S.Santhakumari M.Sc., M.Phil,B.Ed., Ph.D.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002


CERTIFICATE

This is to certify that the project work entitled “Determine the Viscosity of Sulfacetamide in non Aqueous medium” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21201050	A.Aarthy
P21201051	R.Abinaya
P21201052	S.Anusyadevi
P21201053	S.Arthi
P21201054	B.Banupriya




Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.G.Bhuvaneswari M.Sc., M.Phil., PGDCA
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled “Microprocessor based Automatic Traffic Light” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21201055	M.Bhuvaneshwari
P21201056	A.Britta
P21201057	D.Deepa
P21201058	K.Dhivya
P21201059	D.Dhivya



g Bhuvaneswari

Signature of the Guide

J. S. S. S.

Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002

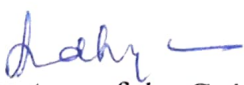
Dr.S.Vidhya, M.Sc., M.Phil,PGDCA., Ph.D.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

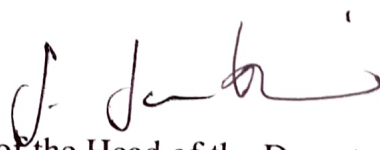
CERTIFICATE

This is to certify that the project work entitled “Active Orbital Control System for Nano Sats Orbiting Moon” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21201060	K.Dhivyadharshini
P21201061	M.Ellakkiya
P21201062	K.Gunapriya
P21201063	D.Jasmin
P21201064	C.V.Jeyapriya




Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Dr.K.Sujatha, M.Sc., M.Phil,PGDCA., Ph.D.,

Department of Physics,

Shrimati Indira Gandhi College,

Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Vibrational Spectroscopy of different types of oils" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21201065	R.Kajoli
P21201066	L.Koushuika
P21201067	P.Keerthana
P21201068	S.Magdaline Jeley
P21201069	S.Merline



K. Sujatha

Signature of the Guide

J. Sujatha

Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Dr.N.Sharmila M.Sc., M.Phil.,Ph.D.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled “Pulsed laser Deposition of Tin Thin Films on Silicon Fabrication” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21201070	C.Monika
P21201071	T.Monikadevi
P21201072	M.Monisha
P21201073	V.Neha
P21201074	V.Nethra
P21201075	S.Niroja



N. Sharmila
Signature of the Guide

J. J. J.
Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.N.Umamaheswari M.Sc., M.Phil.M.C.A,P.G.D.Q.M.,

Department of Physics,

Shrimati Indira Gandhi College,

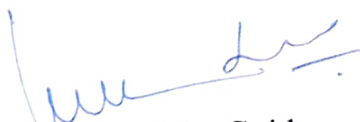
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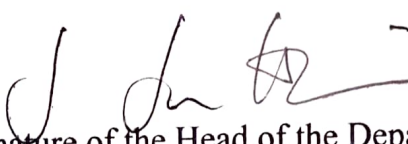
CERTIFICATE

This is to certify that the project work entitled “Synthesis and characterization of Sn Thin Film” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21201076	B.Nishashree
P21201077	K.Nivetha
P21201078	R.Padhmasree
P21201079	N.P.Padmasree
P21201080	S.Savithasri
P21201082	S.Sivasankari




Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.S.Kanmani B.E., M.C.A.,M.Phil.,UGC NET.

Department of Physics,

Shrimati Indira Gandhi College,


Tiruchirappalli-620 002

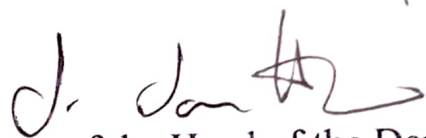
CERTIFICATE

This is to certify that the project work entitled “Cryatal AM Transmitter” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21201083	V.Srividhya
P21201084	V.Umamaheswari
P21201085	S.Vaishnavi
P21201086	R.Vijitha
P21201087	A.Vinothini
P21201088	M.Vishnupriya




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Signature of the Head of the Department


The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.M.Premalatha M.Sc., M.Phil.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

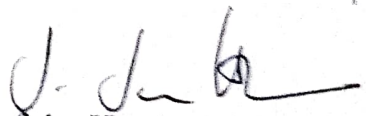
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This is to certify that the project work entitled "Balancing Scale" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S448331	M.Amirthini
CB21S448332	M.Divya
CB21S448333	A.Divyadharshini
CB21S448334	A.Haripriya
CB21S448335	P.Jeevarajeswari


Signature of the Guide




Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College,
Tiruchirappalli - 620 002.

Dr.M.Padmavathy, M.Sc., M.Phil, Ph.D.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Periscope" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S448336	C.Lakshmi
CB21S448337	K.Lakshmipriya
CB21S448338	H.Meenakshi
CB21S448339	N.K.Mrudhamalini
CB21S448340	N.K.Mirudhula

M. padmavathy
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J. J. K.
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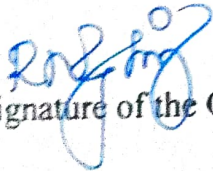
The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms. R. Nagalakshmi M.Sc., M.Phil.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

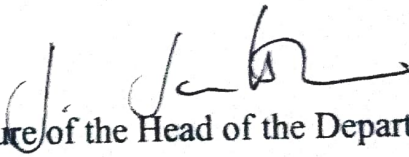
CERTIFICATE

This is to certify that the project work entitled "Baking Soda Volcano" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S448341	R.Nivitha
CB21S448342	P.Prithiba
CB21S448343	S.Sreenidhi
CB21S448344	R,Sridevi
CB21S448345	R.Vasanthapriya
CB21S448345	A.Veenasri


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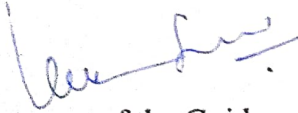
The Head
Dept Of Physics & I.E
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.N.Umamaheswari M.Sc., M.Phil.M.C.A,P.G.D.Q.M.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

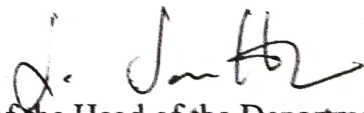
CERTIFICATE

This is to certify that the project work entitled "Fabrication of mini water Heater" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S445501	B.Agalya
CB20S445502	T.Agalya
CB20S445503	S.Brindha
CB20S445504	R.Dakshitha
CB20S445505	G.Deepika


Signature of the Guide




Signature of the Head of the Department
The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002,

Ms.J.Krishnaveni M.Sc., M.Phil.,B.Ed.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Elimination of Carbon Particles from Exhaust Gas" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S445506	P.Gayathiri
CB20S445507	S.Hemapriya
CB20S445508	R.Janaki
CB20S445509	M.Janice Daphney
CB20S445510	S.Keerthika



J. Krishna

Signature of the Guide

d. Janaki

Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002

Ms.S.Sharmila M.Sc., M.Phil.,B.Ed.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Fabrication of Solar Air Conditioning Machine" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S445511	M.Nadhanavarasi
CB20S445512	G.Rathinaprabha
CB20S445513	K.Sivagami
CB20S445514	D.Thamizhthendral
CB20S445515	S.Vanathi
CB20S445516	K.Vinothini



S. Sharmila
Signature of the Guide


J. J. K.
Signature of the Head of the Department
The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli-620 002.

Ms.N.Umamaheswari M.Sc., M.Phil.M.C.A,P.G.D.Q.M.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

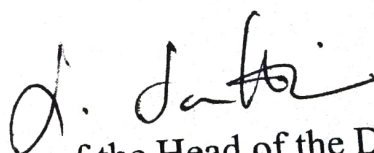
CERTIFICATE

This is to certify that the project work entitled "Construction and application of heat Sensor" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442071	A.Aarthiha
CB19S442072	C.Abitha
CB19S442073	S.Afrinsulthana
CB19S442074	S.Anukaviya
CB19S442075	A.Anusha


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Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

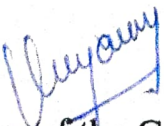
Ms. V. Vijaya M.Sc., M.Phil.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

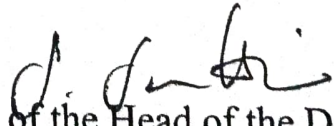
CERTIFICATE

This is to certify that the project work entitled "Design and construction of Antenna Booster" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442076	T.Atchyabharathi
CB19S442077	G.Balambihai
CB19S442078	S.Barani
CB19S442079	S.Bhavani
CB19S442080	M.Bhuvaneshwari




Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.M.Premalatha, M.Sc., M.Phil.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

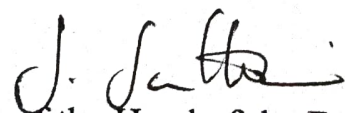
CERTIFICATE

This is to certify that the project work entitled "Possible Effects of Electromagnetic Fields" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442081	S.Brindha
CB19S442082	L.Deepasri
CB19S442083	M.Deepika
CB19S442084	H.Devipriya
CB19S442085	B.Deviga



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The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

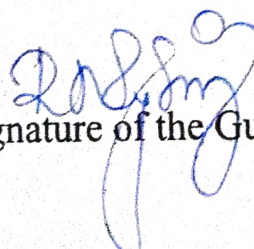
Ms.R.Nagalakshmi M.Sc.,M.Phil.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

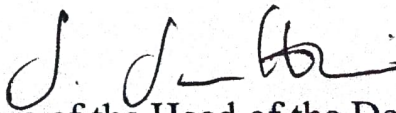
CERTIFICATE

This is to certify that the project work entitled "Construction and application of Heat Sensor" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442086	R.Dhanalaksmi
CB19S442087	A.Dhivya
CB19S442088	T.Durgadevi
CB19S442089	G.Gangadevi
CB19S442090	M.Gayathri




Signature of the Guide


Signature of the Head of the Department

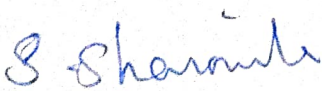
The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.S.Sharmila M.Sc., M.Phil, B.Ed.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

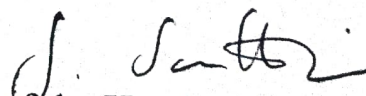
CERTIFICATE

This is to certify that the project work entitled "Constuction of Digital distance measurement" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442091	K.Gomathi
CB19S442092	R.Hemalatha
CB19S442093	R.Ilakkiya
CB19S442094	J.E.Jeyasree
CB19S442095	K.Jeevadarshini


Signature of the Guide




Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.J.Krishnaveni M.Sc., M.Phil., B.Ed
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Multiple reflection in a decorative lamp" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442096	R.Jegadheeswari
CB19S442097	K.Jothiswarubini
CB19S442098	P.Kayalvizhi
CB19S442099	S.Keerthana
CB19S442100	M.Kirubavathi



J. Krishnaveni
Signature of the Guide

J. Jothiswarubini
Signature of the Head of the Department

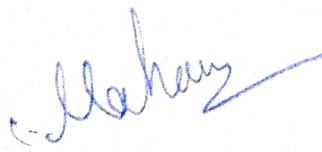
The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.C.Mahalakshmi M.Sc., M.Phil.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

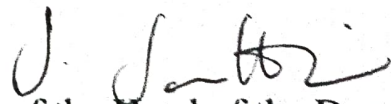
CERTIFICATE

This is to certify that the project work entitled “Frequency response of the Eye” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442101	R.S.Kiruthikadevi
CB19S442102	M.Kokila
CB19S442103	V.Kokila
CB19S442104	M.Krishnaveni
CB19S442105	P.Lalitha


Signature of the Guide




Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

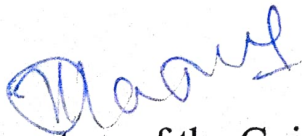
Ms.V.Sasikala M.Sc., M.Phil.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

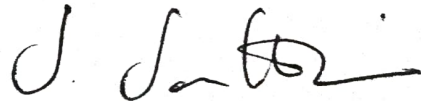
This is to certify that the project work entitled “A Variable Water Drop Lens” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442106	B.Meena
CB19S442107	K.I.Mohanapriya
CB19S442108	T.Mohana
CB19S442109	S.Nithya
CB19S442110	R.Nivetha





Signature of the Guide



Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.S.Kanmani B.E., M.C.A.,M.Phil.,UGC NET.

Department of Physics,

Shrimati Indira Gandhi College,

Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Colour patterns in Soap Films" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442111	G.Nivethita
CB19S442112	R,Nivitha
CB19S442113	S.Padmavathi
CB19S442114	S.Pavithra
CB19S442115	S.Poongodi



Signature of the Guide

Signature of the Head of the Department

A handwritten signature in blue ink, appearing to be "J. Kanmani".

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.D.Meenakshi M.Sc.,I.E.M.Tech.,UGC NET

Department of Physics,

Shrimati Indira Gandhi College,

Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Nanometer motion control with a rubber band" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442116	R.Priya
CB19S442117	M.Priyadharshini
CB19S442118	N.Priyadharshini
CB19S442119	M.Raieesasulthana
CB19S442120	R.Reshmadevi



D. Meenakshi
Signature of the Guide

J. Sathya
Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.P.Sudha M.Sc., M.Phil.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled “Measuring of Sugar content of a liquid with laser pointer” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442121	R.Revathi
CB19S442122	U.Sabitha
CB19S442123	R.Sangeetha
CB19S442124	S.Sangeetha
CB19S442125	M.Sarumathi



P. Sudha

S. Sangeetha

Ms.D.Meenakshi M.Sc.,I.E.M.Tech.,UGC NET

Department of Physics,

Shrimati Indira Gandhi College,

Tiruchirappalli-620 002

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CB19S442117	M.Priyadharshini
CB19S442118	N.Priyadharshini
CB19S442119	M.Raieesulthana
CB19S442120	R.Reshmadevi



D. Meenakshi
Signature of the Guide

J. Sathya
Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.P.Sudha M.Sc., M.Phil.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

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CB19S442122	U.Sabitha
CB19S442123	R.Sangeetha
CB19S442124	S.Sangeetha
CB19S442125	M.Sarumathi



P. Sudha

Signature of the Guide

J. J. Thi

Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Dr.M.Padmavathy M.Sc., M.Phil., Ph.D.,
Department of Physics,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Building a Cell phone microscope" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442126	R.K.Shobika
CB19S442127	T.Subhalakshmi
CB19S442128	V.Snega
CB19S442129	S.S.Subhathra
CB19S442130	R.Suvetha



M. Padmavathy
Signature of the Guide

J. S. S.
Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Dr.A.Angline Prema M.Sc.,B.Ed., M.Phil.,Ph.D

Department of Physics,

Shrimati Indira Gandhi College,

Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Digital Pinhole Camera" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB19S442131	S.Swetha
CB19S442132	V.Swetha
CB19S442133	S.Tharani
CB19S442134	S.Thrisha
CB19S442135	B.Vanisri
CB19S442136	K.Varsha
CB19S442137	B.Vinothini
CB19S442138	T.Yamunadevi



A. Angeline
Signature of the Guide

J. S. S. S.
Signature of the Head of the Department

The Head
Dept Of Physics & I.E.
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.