



UNION CHRISTIAN COLLEGE ALUVA-2



SSR 5th CYCLE 2023



DEPARTMENT OF MATHEMATICS



**B.Sc. Mathematics
Supporting Documents**

**M.Sc. Mathematics
Supporting Documents**

UNION CHRISTIAN COLLEGE, ALUVA, DEPARTMENT
OF MATHEMATICS

(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **DOMINATION IN GRAPHS AND ITS APPLICATIONS** is submitted by MOHAMMED ADHIL ALI (200021033823), RAGHY RAJEEV (200021033850) VEERAJA R KUMAR (200021033853) in partial fulfillment of the requirements for the award of the Degree in BSc Mathematics under the guidance of Ms.Susmi Skaria. The work is carried out as an in-house project by the student.

Anu Nuthan Joshua

Signature of HoD

Dr. ANU NUTHAN JOSHUA.

Head of the Department.

Department of Mathematics.

Union Christian College.

Aluva.

Susmi

Signature of Guide

Ms. SUSMI SKARIA

Assistant Professor

Department of Mathematics

Union Christian College

Aluva

Place : Aluva

Date : 21/04/2023

Evaluated by *Dr. Sreejamel P.R.*

S.P.R.
28/04/2023

UNION CHRISTIAN COLLEGE, ALUVA

DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University - Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled "NUMERICAL SOLUTIONS OF PARTIAL DIFFERENTIAL EQUATIONS" is submitted by ARSHIDA PA_200021033837 and SUMAYYA K N _ 200021033852 in partial fulfillment of the requirements for the award of the Degree in BSC MATHEMATICS under the guidance of MS. SUSMI SKARIA. The work is carried out as an in-house project by the student.

Signature of Guide

Ms. SUSMI SKARIA

Assistant Professor

Department of Mathematics

Union Christian College, Aluva

Place : Aluva

Date : 25/04/2023

Signature of HoD

Dr. ANU NUTHAN JOSHUA

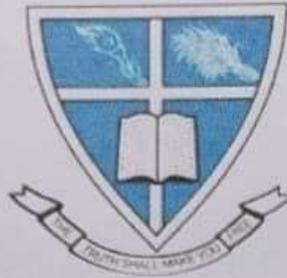
Head of the Department

Department of Mathematics

Union Christian College, Aluva

Evaluated by Dr. Saeedjamil P.R.
27/4/2023

UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS
(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **Combinatorics and Topology of Curves and Knots** is submitted by **Paul Eldho (Reg No: 200021033827)**, **Fathima Rasla K.A (Reg No: 200021033841)** and **Joslyn Biju (Reg No: 200021033841)** in partial fulfilment of the requirements for the award of the Degree in **Mathematics** under the guidance of **Ms. Susmi Skaria, Assistant Professor, Department Of Mathematics**. The work is carried out as an in-house project by the student.

Signature of Guide

Ms. Susmi Skaria
Assistant Professor
Department Of Mathematics
Union Christian College,
Aluva

Signature of HoD

Dr. Anu Nuthan Joshua,
Head of the Department
Department Of Mathematics
Union Christian College,
Aluva

Evaluated by Dr. Sreejand P.R.

[Signature]
28/4/2023

UNION CHRISTIAN COLLEGE, ALUVA

DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University, Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **A STUDY ON IDEALS** is submitted by ETHIN K ELDHO (200021033840), NITHIN T M (200021033848), ROHIT M R (200021033851), in partial fulfilment of the requirements for the award of the Degree in BSc. Mathematics under the guidance of Ms. Mily Mary Sreeba K. The work is carried out as an in-house project by the student.

Ms. Mily Mary Sreeba K
Project Guide
Department of Mathematics
Union Christian College, Aluva

Dr. Anu Nuthan Joshua
Head of the Department
Department of Mathematics
Union Christian College, Aluva

Place: Aluva

Date :26/04/2023

Evaluated by Dr. Sreejamol P.R.

28/04/2023

UNION CHRISTIAN COLLEGE, ALUVA

(Affiliated to Mahatma Gandhi University- Kottayam)

DEPARTMENT OF MATHEMATICS



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **FUZZY SETS AND ITS APPLICATIONS** is submitted by, **MOHAMED AMJAD P M (Reg. No: 200021033822)**, **JYOTHI LAKSHMI K S (Reg. No: 200021033845)**, **KRISHNA C U (Reg. No: 200021033846)**, in partial fulfilment of the requirements for the award of the Degree in Mathematics under the guidance of Ms. Mily Mary Sleeba K. The work is carried out as an in-house project by the student.

Signature of Guide

Ms.Mily Mary Sleeba K.
Assistant Professor.
Department of mathematics.
Union Christian College,Aluva

Signature of HoD

Dr.Anu Nuthan Joshua
Head of the department
Department of mathematics
Union Christian College Aluva

Place : Aluva
Date : April 2023

Evaluated by Dr. Seecjimal P.R.

28/4/2023

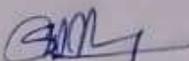
UNION CHRISTIAN COLLEGE, ALUVA
(Affiliated to Mahatma Gandhi University- Kottayam)

DEPARTMENT OF MATHEMATICS



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **MATRIX REPRESENTATION OF GRAPHS** is submitted by, **KRISHNANUNNI N S (Reg. No: 200021033819)**, **MUHAMMED SINAAN M K Reg. No: 200021033824**), **ALGA MARIYA T T (Reg. No: 200021033836)**, in partial fulfilment of the requirements for the award of the Degree in Mathematics under the guidance of Ms .Mily Mary Sleeba K. The work is carried out as an in-house project by the student.


Signature of Guide
Mily Mary Sleeba K.

Place : Aluva
Date : April 2023

Anu Nathan Joshua
Dr. Anu Nathan Joshua
Signature of HoD

Evaluated by Dr. Sreejaval P.R.


27/4/2023

UNION CHRISTIAN COLLEGE, ALUVA

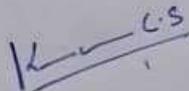
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University- Kottayam)

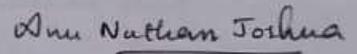


CERTIFICATE OF COMPLETION

This is to certify that the project entitled **PERFECT GRAPH** is submitted by SREEVIDHYA K (Reg.No. 200021033832), SARIKA SREEKUMAR (Reg.No. 200021033830), NIDHEESH KUMAR K S (Reg.No. 200021033825) in partial fulfillment of the requirements for the award of the Degree in MATHEMATICS under the guidance of Mr.KURIAN C SOMAN. The work is carried out as an in-house project by the student.



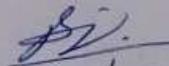
Signature of Guide



Dr. Anu Nathan Joshua

Signature of HoD

Evaluated by Dr. Sreejamal P.R.


28/04/2023

UNION CHRISTIAN COLLEGE, ALUVA

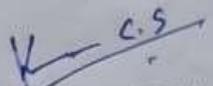
DEPARTMENT OF MATHEMATICS

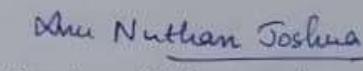
(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **SEQUENCING MODELS** is submitted by **NANDHITHA C VINOD (200021033847), FIYA A B (200021033842), SANDRA MANOJ (200021033828)** in partial fulfillment of the requirements for the award of the Degree in Mathematics under the guidance of Mr. Kurian C Soman. The work is carried out as an in-house project by the student.


Signature of Guide


Signature of HoD

Evaluated by Dr. Sreejimal P.R.


28/04/2023

UNION CHRISTIAN COLLEGE, ALUVA

DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled MAGIC GRAPH is submitted by NUJOOM AIESHA T S (200021033826), ARYA MANOJ (200021033838), POURNAMI K P (200021033849) in partial fulfillment of the requirements for the award of the Degree in Mathematics under the guidance of Mr.KURIAN C SOMAN. The work is carried out as an in-house project by the student.

K. C. S.

Signature of Guide

Anu Nuthan Joshua
Dr. Anu Nuthan Joshua
Signature of HoD

Evaluated by Dr. Sreejani P.R.

[Signature]
27/4/2023

UNION CHRISTIAN COLLEGE, ALUVA

DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled POLYNOMIAL RINGS is submitted by Dhanya Gopinath (200021033855), Gopika V(200021033818) in partial fulfilment of the requirements for the award of the Degree in BSc. Mathematics under the guidance of Dr. Geena Joy. The work is carried out as an in-house project by the student.

Signature of Guide

Geena Joy
Dr. Geena Joy

Assistant Professor

Department of Mathematics,

Union Christian College, Aluva

Anu Nuthan Joshua

Signature of HoD

Dr. Anu Nuthan Joshua

Head of the Department

Department of Mathematics

Union Christian College, Aluva

Place: Aluva

Date: 26/04/2023

Evaluated by Dr. Sreyansh P.R.

S.P.R.
28/4/2023

UNION CHRISTIAN COLLEGE ALUVA

DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University, Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **A STUDY ON CANTOR SET** is submitted by AKSHARA GIREESH (200021033812), ATHUL K S (200021033814), SANKARI SREEKUMAR (200021033829) in partial fulfilment of the requirements for the award of the Degree in BSc. Mathematics under the guidance of Dr. GEENA JOY. The work is carried out as an in-house project by the student.

Signature of Guide

Dr. Geena Joy

Assistant professor

Department of mathematics

Union Christian College, Aluva

Signature of HoD

Dr. Anu Nuthan Joshua

Head of the Department

Department of Mathematics

Union Christian College, Aluva

Place: Aluva

Date : 26/04/2023

Evaluated by Dr. Seejimal P.R.

27/4/2023

CERTIFICATE
UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS
(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled "RHOTRIX THEORY" is submitted by, BETSY VARGHESE (Reg. No: 200021033839), CHACKO BABU (Reg. No: 200021033815), ZIANA M MUHAMMED (Reg. No: 200021033854) in partial fulfilment of the requirements for the award of the Degree in Mathematics under the guidance of Dr. Anu Nuthan Joshua. The work is carried out as an in-house project by the student.

Anu Nuthan Joshua
Signature of Guide
Dr. Anu Nuthan Joshua
Assistant Professor and
Head, Department of Mathematics
Union Christian College, Aluva

Anu Nuthan Joshua
Signature of HoD

Place : Aluva
Date : 24/04/ 2023

Evaluated by Dr. Sreejimal P.R.

S.P.
27/4/2023

UNION CHRISTIAN COLLEGE, ALUVA

DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled A STUDY ON ANT COLONY OPTIMIZATION is submitted by Gilna Kuriakose (200021033817), Aiswarya Pradeep (200021033834), Sivjit J Kumar (200021033831) in partial fulfilment of the requirements for the award of the Degree in BSc. Mathematics under the guidance of Dr. Anu Nuthan Joshua. The work is carried out as an in-house project by the student.

Anu Nuthan Joshua
Dr. Anu Nuthan Joshua
Signature of Guide

Anu Nuthan Joshua
Signature of HoD
Dr. Anu Nuthan Joshua

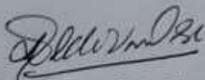
Evaluated by Dr. Sreejamal P.R. *[Signature]*
27/4/2023

UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS
(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **HERMITE POLYNOMIALS** is submitted by ASHIN V SAJI (200021033813), MEEJO JOSEY(200021033821), KRISHNAPRIYA RAJAN(200021033820) in partial fulfillment of the requirements for the award of the Degree in MATHEMATICS under the guidance of Mr. Eldo Varghese. The work is carried out as an in-house project by the students.

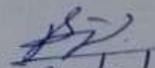

Signature of Guide

Ann Nuthan Joshua

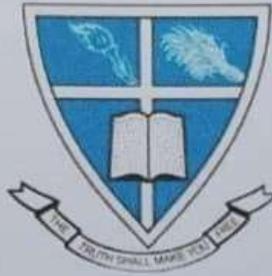
Dr. Ann Nuthan Joshua

Signature of HoD

Evaluated by Dr. Sreejames P-R.


28/4/2023

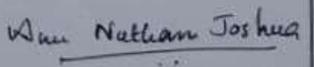
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DEPARTMENT OF MATHEMATICS
(Affiliated to Mahatma Gandhi University- Kottayam)

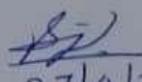


CERTIFICATE OF COMPLETION

This is to certify that the project entitled **NUMERICAL METHODS OF ORDINARY DIFFERENTIAL EQUATIONS** is submitted by **ABHIJITH K S (200021033833)**, **DEVIKA P S (200021033816)**, **GOPIKA SURESHKUMAR (200021033843)**, in partial fulfilment of the requirements for the award of the Degree in **MATHEMATICS** under the guidance Of **Mr. ELDO VARGHESE**. The work is carried out as an in-house project by the student.

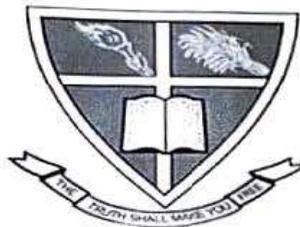

Signature of Guide


Dr. Anu Nathan Joshua
Signature of HoD

Evaluated by Dr. Sreejama P.R. 
27/4/2023

UNION CHRISTIAN COLLEGE, ALUVA DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University, Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **FAREY FRACTIONS AND SIMPLE CONTINUED FRACTIONS** is submitted by **SEETHAL KP (210011015107)** in partial fulfillment of the requirements for the award of the Postgraduate Degree In Mathematics under the guidance of **Ms.Mily Mary Sreeba**. The work is carried out as an in-house project by the student.

Anu Nuthan Joshua
(Signature of H.O.D)
Dr. ANU NUTHAN JOSHUA
Head of the Department
Department of Mathematics
Union Christian Collage
Aluva

Mily Mary Sreeba
(Signature of Guide)
Ms. MILY MARY SREEBA K
Assistant Professor
Department of Mathematics
Union Christian Collage
Aluva

Signature of the Internal Examiner(s)

Signature of the External Examiner

[Handwritten signatures]

UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated To Mahatma Gandhi University, Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **SEMIGRAPHS** is submitted by **SEENU JENNIS (210011015106)** in partial fulfillment of the requirements for the award of the degree in MSc Mathematics under the guidance of Dr. Geena Joy. The work is carried out as an in-house project by the student.

Dr. Anu Nathan Joshua
Signature of HoD
Dr. ANU NUTHAN JOSHUA.
Head of the Department
Department of Mathematics
Union Christian College
Aluva

Dr. Geena Joy
Signature of Guide
Dr. GEENA JOY
Assistant Professor
Department of Mathematics
Union Christian College
Aluva

Place: Aluva
Date: 11/08/2023

Signature of Internal Examiners

Signature of External Examiners

[Handwritten signatures]

UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University, Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **GEODESIC CONVEXITY IN GRAPHS** is submitted by SANDRA PRABHAKAR (210011015105) in partial fulfillment of the requirement for the award of the Postgraduate Degree in Mathematics under the guidance of Dr. ANU NUTHAN JOSHUA. The work is carried out as an in-house project by the student.

Anu Nathan Joshua
Signature of HoD
Dr. ANU NUTHAN JOSHUA
Head of the Department
Department of Mathematics
Union Christian college
Aluva

Anu Nathan Joshua
Signature of Guide
Dr. ANU NUTHAN JOSHUA
Assistant Professor
Department of Mathematics
Union Christian College
Aluva

Place : Aluva

Date: 11/08/2023

Signature of Internal Examiners

Signature of External Examiners

Two handwritten signatures in black ink, representing the external examiners, are written over the label 'Signature of External Examiners'.

UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahathma Gandhi University, Kottayam)



CERTIFICATE OF COMPLETION

This to certify that the project entitled **BILINEAR FORMS** is submitted by SANDRA M V in partial fulfilment of the requirements for the award of the postgraduate degree in Mathematics under the guidance of Sir ELDO VARGESE. The work is carried out as in-house by the student.

Anu Nuthan Joshua

SIGNATURE OF HOD
Dr. ANU NUTHAN JOSHUA
Head of the Department
Department of mathematics
Union Christian College
Aluva

Elldo Vargese

Signature of Guide
Sir ELDO VARGESE
Assistant professor
Department of Mathematics
Union Christian College
Aluva

Place : Aluva

Date: 11/08/2023

SIGNATURE OF INTERNAL EXAMINAR

SIGNATURE OF EXTERNAL
EXAMINAR

[Handwritten signatures]

UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahathma Gandhi University, Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **galois theory and application** is submitted by RESHMA MURALEEDHARAN (210011015103) in partial fulfillment of the requirements for the award of the Postgraduate Degree in Mathematics under the guidance of Mr. KURIAN C SOMAN. The work is carried out as an in-house project by student.

Anu Nuthan Joshua

Signature of HoD

Dr. ANU NUTHAN JOSHUA

Head of the Department

Department of Mathematics

Union Christian College

Aluva

K. C. S.

Signature of Guide

Mr. KURIAN C SOMAN

Assistant Professor

Department of Mathematics

Union Christian College

Aluva

Place: Aluva

Date: 11/08/2023.

signature of the internal examiner

signature of the External examiner

[Handwritten signatures]

UNION CHRISTIAN COLLEGE, ALUVA, DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University- Kottayam)



Certificate of Completion

This is to certify that the project entitled **FUZZY LOGIC AND ITS APPLI-
CATIONS** is submitted by **JOSMI VARGHESE** (210011015101) in partial
fulfillment of the requirements for the award of the Degree in MSc Mathematics
under the guidance of **Mr. Kurian C Soman**. The work is carried out as an
in-house project by the student.

Anu Nathan Joshua

Signature of HoD

Dr. ANU NUTHAN JOSHUA

Head of the Department

Department of Mathematics

Union Christian College

Aluva

K C S

Signature of Guide

Mr. KURIAN C SOMAN

Assistant Professor

Department of Mathematics

Union Christian College

Aluva

Place: Aluva

Date: 11/08/2023

Signature of external examiner:

Signature of internal examiner:

UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **PELLS'S EQUATION** is submitted by **FATHIMA A.A** (Reg no: 210011015100) in partial fulfillment of the requirements for the award of the degree in Mathematics under the guidance of Ms. Susmi Skaria. The work is carried out as an in-house project by the student

Anu Nathan Joshua

Dr. ANU NUTHAN JOSHUA
Head of the department
Department of mathematics,
U.C College, Aluva

Susmi

SUSMI SKARIA
Assistant Professor
Department of Mathematics
U. C College, Aluva

Signature of internal examiner:

Signature of external
examiner:

[Handwritten signatures]

UNION CHRISTIAN COLLEGE,ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University, Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **LIE ALGEBRA** is submitted by ANUPAMA ANTONY (210011015099) in partial fulfillment of the requirements for the award of the Postgraduate Degree in Mathematics under the guidance of Ms.Mily Mary Sreeba. The work is carried out as an in-house project by the student.

Anu Nuthan Joshua
Signature of HoD
Dr. ANU NUTHAN JOSHUA
Head of the Department
Department of Mathematics
Union Christian College
Aluva

Mily Mary Sreeba
Signature of Guide
Ms. MILY MARY SREEBA K
Assistant Professor
Department of Mathematics
Union Christian College
Aluva

Place: Aluva
Date: 11/08/2023

i
Signature of Internal Examiner(s) Signature of External Examiner(s)
[Handwritten Signature] *[Handwritten Signature]*

UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University, Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that this project entitled **A STUDY ON MODULES** is submitted by **ALEENA ROSE (210011015097)** in partial fulfillment of the requirements for the award of the Postgraduate Degree in Mathematics under the guidance of **Dr.Geena Joy** is carried out as an in-house project by the student.

Anu Nuthan Joshua
Signature of HoD
Dr.Anu Nuthan Joshua
Head of the Department
Department of Mathematics
Union Christian College
Aluva
Place:Aluva
Date: 11/08/2023

G. Joy
Signature of Guide
Dr.Geena Joy
Assistant Professor
Department of Mathematics
Union Christian College
Aluva

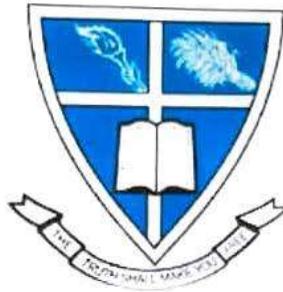
i

Signature of Internal Examiners(s)

Signature of External Examiners(s)

UNION CHRISTIAN COLLEGE ,ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahathma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

There is to certify that the project entitled **LINEAR CODES** is submitted by AISHWARYA P(210011015096) in partial fulfillment of the requirements for the award of the Postgraduate Degree in Mathematics under the guidance of Dr. ANU NUTHAN JOSHUA. The work is carried out as an in-house project by the student.

Anu Nuthan Joshua
Signature of HoD
Dr. ANU NUTHAN JOSHUA
Head of the Department
Department of Mathematics
Union Christian College
Aluva

Anu Nuthan Joshua
Signature of Guide
Dr. ANU NUTHAN JOSHUA
Head of the Department
Department of Mathematics
Union Christian College
Aluva

Place : Aluva
Date: 11/08/2023

Signature of Internal Examiner

Signature of External Examiners

UNION CHRISTIAN COLLEGE , ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahathma Gandhi University , Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled **Fuzzy Topological Space** is submitted by AARYA M.A (210011015095) in partial fulfillment of the requirements for the award of the Postgraduate Degree in Mathematics under the guidance of Mr. ELDO VARGHESE .The work is carried out as an -house project by the student.

Anu Nuthan Joshua

Signature of HOD
Dr. ANU NUTHAN JOSHUA
Head of the Department
Department of Mathematics
Union Christian College
Aluva

Elido Varghese

Signature of Guide
Mr. ELDO VARGHESE
Assistant Professor
Department of Mathematics
Union Christian College
Aluva

Place:Aluva

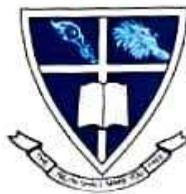
Date: 11-08-2023

Examined

[Handwritten signatures]

UNION CHRISTIAN COLLEGE, ALUVA
DEPARTMENT OF MATHEMATICS

(Affiliated to Mahatma Gandhi University- Kottayam)



CERTIFICATE OF COMPLETION

This is to certify that the project entitled "**GRAPH PRODUCTS**" is an authentic record of the project work carried by **SUMAYYA SALIM**(Reg No:210011015109) under the guidance and supervision in the Department of Mathematics, Union Christian Collage Aluva. This is carried out by the student as an inhouse project

Anu Nathan Joshua

Dr. ANU NUTHAN JOSHUA,
Head of the department
Department of mathematics.
Union Christian College
Place:

Susmi Skaria

SUSMI SKARIA
Assistant Professor
Department of Mathematics
Union Christian College

Date:
Signature of Internal Examinor:

2

Signature of External Examinor
[Signature]