# AN STUDY ON NUMERICAL SOLUTION OF PARTIAL DIFFERENTIAL EQUATION

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of the

Requirement for the Award of the Degree of

#### **BACHELOR OF SCIENCE IN MATHEMATICS**

#### Submitted by

Ayısha Nasrın A	(2020MB48)
Abirami R	(2021MB01)
Anitha P	(2021MB02)
Ashuruthi M	(2021MB03)
Avaidhaa Sarojini A M	(2021MB04)
Deepika V	(2021MB05)

Under the Guidance of

Dr. V. Vanitha, M.Sc., M.Phil, B.Ed, ACIM, SET, Ph.D Head and Assistant Professor Department of Mathematics (SF)



Fatima College (Autonomous)

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March - 2024

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#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON NUMERICAL SOLUTION OF PARTIAL DIFFERENTIAL EQUATION" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision

Ayisha Nasrin A	(2020MB48)
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Avaidhaa Sarojini A.M	(2021MB04)
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Place: Madurai

Date: 26.03.2024

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Date: 26.03.2024

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A. Ayisha Nasrin (2020MB48) A. Ayisha Nasrin

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# A STUDY ON DOMINATION IN GRAPH THEORY

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of the Requirement for the Award of the Degree of

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#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON DOMINATION IN GRAPH THEORY" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

I. Munecswari 2021MB73

S. Nagarathinam 2021MB74

E. Poornima 2021MB76

K. Pragatheeswari 2021MB77

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# A STUDY ON IMAGE PROCESSING ON MATLAB

A Project Submitted to Madurai Kamaraj University
In Partial Fulfillment of the
Requirement for the Award of the Degree of

## BACHELOR OF SCIENCE MATHEMATICS

#### Submitted by

2021MB09

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HEMAPATHI.C

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Mary Land, Madurai – 625018, Tamil Nadu,

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#### **CERTIFICATE**

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DHAARMINI.M.S.I	(2021MB06)
DHARANISRI.N	(2021MB07)
DHARSHINI.S	(2021MB08)
HEMAPATHI.C	(2021MB09)

Place: Madurai

Date: 26,03.2024

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HEAD OF THE DEPARTMENT

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We do here by declare that this work has been originally carried out by us under the guidance and supervision of Dr. V.VANITHA, M.Sc., M.Phil., B.Ed., ACIM, SET, Ph.D., Head of The Department, Department of Mathematics(SF), Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

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M.S.I.DHAARMINI (2021MB06) M.S.T. Dhaarmini

N.DHARANISRI (2021MB07) N · Dharanismi

S.DHARSHINI (2021MB08) S. Dharshini

C.HEMAPATHI (2021MB09) C-Hemapathi

#### A STUDY ON REGRESSION ANALYSIS FOR DATA SCIENCE

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of the Requirement for the Award of the Degree of

#### BACHELOR OF SCIENCE IN MATHEMATICS

#### Submitted by

2021MB12 JEGADEESWARI B

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2021MB14 KARISHMA S

2021MB16 KEERTHIGA S

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#### **CERTIFICATE**

This to certify that the project entitled, ,"A STUDY ON REGRESSION ANALYSIS FOR DATA SCIENCE" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision

JEGADEESWARI B	(2021MB12)
KALPANA K	(2021MB13)
KARISHMA S	(2021MB14)
KEERTHIGA S	(2021MB16)

Place: Madurai

Date: 26.03. 24

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We do here by declare that this work has been originally carried out by us under the guidance and supervision of Dr. V. VANITHA, Head of the Department, Department of Mathematics(SF), Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

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KALPANA K (2021MB13) - K. Kalpaa

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KEERTHIGA S (2021MB16) - S. Kavithiga

# A STUDY ON ALGEBRAIC GRAPH THEORY

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of the

Requirement for the Award of Degree of

#### **BACHELOR OF SCIENCE IN MATHEMATICS**

Submitted by

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2021MB19 MAHALAKSHMI ALIES ARUNA .S

2021MB20 MAHESWARI.V

2021MB21 MOHANA SUPRIYA .A

Under the Guidance of

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FATIMA COLLEGE (Autonomous)

Re-Accredited with 'A++' Grade by NAAC (IVCYCLE)

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MARCH - 2024

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Madurai- 625 018.

#### CERTIFICATE

This is to certify that the project entitled, "A STUDY ON ALGEBRAIC GRAPH THEROY" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics at Fatima College (Autonomous), is a bonafide record of work carried out by them under my guidance and supervision.

T.KISHA PENNI (2021MB17)

S.LAKSHMI (2021MB18)

S.MAHALAKSHMI ALIES ARUNA (2021MB19)

Signature of the

External Examiner

V.MAHESWARI (2021MB20)

A.MOHANA SUPRIYA (2021MB21)

R . Row Signature of the Internal Examiner

Signature of the Head of the Department

Dr. V. VANITHA
M.Sc, M.Phil, B.Ed, ACIM, SET, Ph.D
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We do hereby declare that this work has been originally carried out by us under the guidance and supervision of Mrs. R.Rajeswari, Assistant Professor, Department of Mathematics, Fatima College (Autonomous), Madurai -18 affiliated to Madurai Kamaraj University, Madurai inpartial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.3.24

Station: Madurai

T.KISHA PENNI (2021MB17)

& Lakshmi S.LAKSHMI (2021MB18)

8. melia Lakehni ALies aruna S.MAHALAKSHMI ALIES ARUNA (2021MB19)

V. Maheswari

V.MAHESHWARI (2021MB20)

A. Mohana Syoviya
A.MOHANA SUPRIYA (2021MB21)

# A STUDY ON FUZZY RELATIONS AND FUZZY GRAPH

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of the Requirement for the Award of the Degree of

# **BACHELOR OF SCIENCE MATHEMATICS**

Submitted by

2021MB22 K. MONISHA

2021MB23 G. MURUGESHWARI

2021MB24 J. NASREEN NILOPHER

2021MB25 T. NIVETHITHA

Under the Guidance of

Mrs. R. RAJESWARI, M.Sc., M.Phil., SET., PGDCA.,

Assistant Professor.

Department of Mathematics



#### FATIMA COLLEGE(Autonomous)

Re-Accredited with 'A++' Grade by NAAC (IV CYCLE)

Madurai-625018, Tamil Nadu.

**MARCH - 2024** 

Mrs. R. RAJESWARI M.Sc., M.Phil., SET, PGDCA.,

Assistant Professor,
Department of Mathematics,
Fatima College (Autonomous),
Madurai- 625 018.

#### CERTIFICATE

This is to certify that the project entitled, "A STUDY ON FUZZY RELATIONS AND FUZZY GRAPH" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics at Fatima College (Autonomous), is a bonafide record of work carried out by them under my guidance and supervision.

2021MB22 K. MONISHA

2021MB23 G.MURUGESWARI

2021MB24 J.NASREENNILOPHER

2021MB25 T. NIVETHITHA

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Signature of the External Examiner

Signature of the Head of the Department

Dr. V. VANITHA
M.Sc, M.Phil, B.Ed, ACIM, SET, Ph.D
Head & Assistant Professor
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Fatima College, Madurai - 625018

We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. R. RAJESWARI, M.Sc., M.Phil., SET., PGDCA., Assistant Professor, Department of Mathematics, Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

Station: Madurai

(C. Marisha) K. Monisha (2021MB22)

(j. Lunugethwai G. MURUGESWARI (2021MB23)

J. Nasreen Nilopher (2021MB24)

T. NIVETHITHA (2021MB25)

Nivetteth. T

#### A STUDY ON MEASURE THEORY

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of

the Requirement for the Award of the Degree of

#### BACHELOR OF SCIENCE IN MATHEMATICS

#### Submitted by

2021MB43 SYED ASMITHA H

2021MB45 VARSHA M

2021MB46 VARSHINI M

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Mary Land, Madurai - 625018, Tamil Nadu.

MARCH - 2024

#### Mix. R. JENOVI ROSARY DEEPA M.Sc. M.Phil, SET, PGDCA

Secretari Professor

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Latima College (Autonomous)

Madurai 625018

#### CERTIFICATE

This to certify that the project entitled. "A STUDY ON MEASURE THEORY" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

SYED ASMITHA 2021MB43

VARSHA 2021MB45

VARSHINI 2021MB46

Place: Madurai

Date: 26. 08 2524

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We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. R. JENOVI ROSARY DEEPA, Assistant Professor, Department of Mathematics(SF), Fatima College (Autonomous), Madurai-18

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H. Oyal Asmira -H. SYED ASMITHA (2021MB43)

M. VARSHA (2021MB45)

M. Varshin

M. VARSHINI (2021MB46)

Station: Madurai

Date: 26. 03. 2024

# A STUDY ON NUMBER THEORY IN CRYPTOGRAPHY

A Project Submitted To Madurai Kamaraj University in Partial Fulfilment of the Requirement for the Award of Degree of

# BACHELOR OF SCIENCE IN MATHEMATICS

Submitted by:

2021MB51 AJITHAS

2021MB52 APARNA.S

2021MB53 ATCHAYA.S

2021MB56 DEEPIKA.A

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#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON NUMBER THEORY IN CRYPTOGRAPHY" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

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ATCHAYA S	2021MB53
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Place: Madurai

Date: 26.03.2024

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We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. B. Vethamary Jacquline, Assistant Professor, Department of Mathematics(SF), Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

Place: Madurai

SHIY . AJITHA S (2021MB51)

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# A STUDY ON APPLICATION OF DIFFERTENTIAL EQUATIONS IN MEDICAL FIELD

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of the

Requirement for the Award of the Degree of

#### **BACHELOR OF SCIENCE IN MATHEMATICS**

Submitted by

2021MB61 FIRTHOUS A

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2021MB63 JAYASRI M

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This to certify that the project entitled, "A STUDY ON APPLICATION OF

DIFFERENTIAL EQUATIONS IN MEDICAL FIELD" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record ofwork carried out by them under my guidance and supervision.

FIRTHOUS A 2021MB61

ISHWARYA J 2021MB62

JAYASRI M 2021MB63

Place: Madurai

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Date: 26.03.2024

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We do here by declare that this work has been originally carried out by us under the guidance And supervision of Mrs.B. Vethamary Jacquline, Assistant Professor, Department of Mathematics (SF), Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

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J. Ishusseefo

M Jayassij Jayasri M (2021MB63)

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# AN STUDY ON STRONG DOMINATION IN GRAPH THEORY

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment

of the Requirement for the Award of the Degree of

#### **BACHELOR OF SCIENCE MATHEMATICS**

#### Submitted by

2021MB79 RAGAVI C

2021MB80 RISWANA PARVEEN T

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MARCH - 2024

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Madurai - 625018

#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON STRONG DOMINATION IN GRAPHS" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

RAGAVIC

2021MB79

RISWANA PARVEEN T

2021MB80

RUBADHARSHINI V

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2021MB82

Place: Madurai

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We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. J. Annaal Mercy, Assistant Professor, Department of Mathematics, Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfilment for the award of degree of Bachelor of Science in Mathematics.

Date: 25.03.2024

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C.RAGAVI (2021MB79)

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V. RUBADHARSHINI (2021MB81)

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# A STUDY ON INTEGER PROGRAMMING

A Project Submitted to Madurai Kamaraj University in Partial Fulfilment of the

Requirement for the Award of Degree of

## **BACHELOR OF SCIENCE IN MATHEMATICS**

SUBMITTED BY

2021MB83 SHOBIKA M 2021MB85 SIVA MEERA R

2021MB90 SUJITHA V

2021MB87 SONASHREE S R

Under the Guidance of

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**Assistant Professor** 

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FATIMA COLLEGE (Autonomous)

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**MARCH 2024** 

## Mrs. P. DHANAPRIYA, M.Sc., M.Phil., SET

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This to certify that the project entitled, "A STUDY ON INTEGER PROGRAMMING" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

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SIVA MEERA R 2021MB85

SONASHREE S R 2021MB87

SUJITHA V 202MB90

Place: Madurai

Date: 26.03.2024

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We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. P. Dhanapriya, Assistant Professor, Department of Mathematics (SF), Fatima College (Autonomous), Madurai -18 and this work has not been submitted elsewhere for any other degree.

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26.03.2024

Station: Madurai

M. Shobika. SHOBIKA M(2021MB83)

R. SIVOL Mee 700 SIVA MEERA R(2021MB85)

C.R. Sonashver. SONA SHREE S R (2021MB87)

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# A STUDY ON GRAPH LOGIC

A Project Submitted To Madurai Kamaraj University in Partial Fulfilment of the

Requirement for the Award of Degree of

# **BACHELOR OF SCIENCE IN MATHEMATICS**

SUBMITTED BY

2021MB91 SUVITHA M

2021MB92 SWETHA S

2021MB93 VANISHA R

2021MB95 VISHVAMAHALAKSHMI M

Under the Guidance of

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FATIMA COLLEGE (Autonomous)

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Madurai-625018, Tamilnadu.

**MARCH 2024** 

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Assistant professor,

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Madurai -625018

#### CERTIFICATE

This to be certified that the project entitled, "A STUDY ON GRAPH LOGIC" submitted by The following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

SUVITHA M

2021MB91

**SWETHAS** 

2021MB92

VANISHA R

2021MB93

VISHVAMAHALAKSHMI M

2021MB95

Place: Madurai Date: 26.03.2024

INTERNAL EXAMINER

SIGNATURE OF THE **EXTERNAL EXAMINER** 

SIGNATURE OF THE

HEAD OF THE DEPARTMENT Dr. V. VANITHA M.Sc, M.Phil, B.Ed, ACIM, SET, Ph.D Head & Assistant Professor Department of Mathematics(SF) Fatima College, Madurai - 625018

We do hereby declare that this work has been originally carried out by us under the guidance and supervision of Mrs. P. Dhanapriya, Assistant Professor, Department of Mathematics, Fatima College (Autonomous), Madurai -18 and this work has not been submitted elsewhere for any other degree.

Date:26.03.2024

Station: Madurai

M. SUVITHA (2021MB91)

S. Sinetha

S. SWETHA (2021MB92)

R. Vanisla

R. VANISHA (2021MB93)

M. VISHVAMAHALAKSHMI (2021MB95)

## A STUDY ON FUZZY SET THEORY

A Project Submitted To Madurai Kamaraj University in Partial Fulfillment of the

Requirement for the Award of Degree of

## **BACHELOR OF SCIENCE IN MATHEMATICS**

SUBMITTED BY

2021MB96 NOOR MYMOON M

2021MB97 RAJAPRIYA V

2021MB98 SHARMILA S

2021MB99 JAYAM SHIVASHANGARI K

Under the Guidance of

Mrs. P. DHANAPRIYA, M.Sc, M.Phil., SET

**Assistant Professor** 

Department of Mathematics (SF)



FATIMA COLLEGE (Autonomous)

Re-Accredited with 'A++' Grade by NAAC (IV CYCLE)

Madurai - 625018, Tamilnadu.

**MARCH 2024** 

# Mrs. P. DHANAPRIYA, M.Sc., M. Phil., SET Assistant Professor,

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## CERTIFICATE

This to certify that the project entitled, "A STUDY ON FUZZY SET THEORY" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

NOOR MYMOON M

2021MB96

RAJAPRIYA V

2021MB97

SHARMILA S

2021MB98

JAYAM SHIVASHANGARI K

2021MB99

Place: Madurai

Date: 94

26.03.2024.

SIGNATURE OF THE

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SIGNATURE OF THE EXTERNAL EXAMINER

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HEAD OF THE DEPARTMENT

V. VANITHA

M.Phil, B.Ed, ACIM, SET, Ph.D

ead & Assistant Professor
Iment of Mathematics(SF)

Madurai - 625018

We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. P. Dhanapriya, Assistant Professor, Department of Mathematics(SF), Fatima College (Autonomous), Madurai -18 and this work has not been submitted elsewhere for any other degree.

Date: 26.03.2024

Station: Madurai

M. Noor mynoon.

M. NOOR MYMOON (2021MB96)

V. Rajapriya.

V. RAJAPRIYA (2021MB97)

S. Saomla

S. SHARMILA (2021MB98)

K. JAYAM SHIVASHANGARI (2021MB99)

## A STUDY ON CONNECCTED GRAPHS ON FUZZY GRAPH THEORY

A Project Submitted to Madurai Kamaraj University in Partial fulfillment

of the Requirement for the Award of the Degree of

#### **BACHELOR OF SCIENCE IN MATHEMATICS**

### Submitted by

2021MB104 Surekha C

2021MB105 Vidhya Sree P

2021MB106 Ramchitra R

2021MB107 Sowmiya R

Under the Guidance of

Dr. M. Subha, M.Sc, M.Phil, DCA, ADHT, Ph.D

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Re-Accredited with "A++" Grade by NAAC (Cycle4)

Mary Land, Madurai- 625018, Tamil Nadu.

March-2024

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Madurai - 625018

#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON CONNECTED GRAPHS IN FUZZY GRAPH THEORY" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

SUREKHA C 2021MB104

VIDHYA SREE P 2021MB105

RAMCHITRA R 2021MB106

SOWMIYA R 2021MB107

Place: Madurai

Date: 26.03.2024

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SIGNATURE OF THE HEAD OF THE DEPARTMENT

Dr V VANITHA M.Sc. M.Phil. B.Ed. ACIM. SET, Ph.D. Department of Mathematics Fatima College, Madural - 625018

We do hereby declare that this work has been originally carried out by us under the guidance and supervision of Dr. M. Subha, Assistant Professor, Department of Mathematics, Fatima College (Autonomous). Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

Station: Madurai

C · Suzekha Surekha C (2021MB104)

Vidhya Price & Vidhya sree P (2021MB105)

Ramchitra R (2021MB106)

R. Sowmiya R (2021MB107)

## A STUDY ON DIRECTED GRAPHS IN GRAPH THEORY

A Project Submitted to Madurai Kamaraj University in Partial fulfillment

of the Requirement for the Award of the Degree of

#### BACHELOR OF SCIENCE IN MATHEMATICS

#### Submitted by

2021MB108 Durga Devi R

2021MB109 Mohanapriya A

2021MB110 Thasbiha Banu A

2021MB111 Vishnupriya M

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Dr. M. Subha, M.Sc., M.Phil., DCA., ADHT., Ph.D

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Re-Accredited with "A++" Grade by NAAC (Cycle4)

Mary Land, Madurai-625018, Tamil Nadu.

March-2024

Dr. M. Subha, M.Sc, M.Phil, DCA, ADHT, Ph.D

Assistant Professor

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Madurai - 625018

#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON DIRECTED GRAPH IN GRAPH THEORY" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

DURGA DEVI R

2021MB108

MOHANAPRIYA A

2021MB109

THASBIHA BANU A

2021MB110

VISHNUPRIYA M

2021MB111

Place: Madurai

Date: 26.03.2024

SIGNATURE OF THE

INTERNAL EXAMINER

SIGNATURE OF THE EXTERNAL EXAMINER

SIGNATURE OF THE

HEAD OF THE DEPARTMENT

Dr. V. VANITHA

M.Sc, M.Phil, B.Ed, ACIM, SET, Ph.D Head & Assistant Professor Department of Mathematics(SF) Fatima College, Madurai - 625018

We do hereby declare that this work has been originally carried out by us under the guidance and supervision of Dr. M. Subha, Assistant Professor, Department of Mathematics, Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

Station: Madurai

R. Durgadelle Durga Devi R (2021MB108)

A-Mohanapriyer

Mohanapriya A (2021MB109)

A Thusburg Thasbiha Banu A (2021MB110)

MV lehn v Jouya Vishnupriya M (2021MB111)

#### A STUDY ON VARIOUS TYPES OF GRAPH

A Project Submitted to Madurai Kamaraj University in Partial Fulfilment of the Requirement for the Award of the Degree of

## BACHELOR OF SCIENCE MATHEMATICS

Submitted by

2021MB26 M. PRADHIKSHAA

2021MB27 D. PRAVEENA

2021MB28 P. S. PRIYADHARSHINI

2021MB29 V. RAMYA

Under the Guidance of

Mrs. R. RAJESWARI, M.Sc., M.Phil., SET., PGDCA.,

**Assistant Professor** 

Department of Mathematics



#### Fatima College (Autonomous)

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Mary Land, Madurai – 625018,

Tamil Nadu

MARCH - 2024

#### Mrs. R. RAJESWARI, M.Sc., M. Phil., SET, PGDCA

Assistant professor, Department of Mathematics Fatima College (Autonomous) Madurai - 625018

#### **CERTIFICATE**

This is to certify that the project entitled "VARIOUS TYPES OF GRAPH" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

2021MB26 M. PRADHIKSHAA

2021MB27 D. PRAVEENA

2021MB28 P. S. PRIYADHARSHINI

2021MB29 V. RAMYA

Place: Madurai

Date: 26.03.2024

SIGNATURE OF THE

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HEAD OF THE DEPARTMENT

Dr. V. VANITHA
M.Sc, M.Phil, B.Ed, ACIM, SET, Ph.D
Head & Assistant Professor
Department of Mathematics(SF)
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We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. R. RAJESWARI, M.Sc., M.Phil., SET., PGDCA., Assistant Professor, Department of Mathematics, Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfilment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

Station: Madurai

M. PRADHIKSHAA 2021MB26

D. Bravaera.

Morade

D. PRAVEENA 2021MB27

P.S. Priyadharshini

P. S. PRIYADHARSHINI 2021MB28

V. RAMYA 2021MB29

## A STUDY ON FIXED POINTS IN QUASI METRIC SPACE

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of the Requirement for the Award of the Degree of

#### **BACHELOR OF SCIENCE IN MATHEMATICS**

#### Submitted by

2021MB30 Ranjani K.S

2021MB31 Rinthiya S

2021MB34 ShanmugaPriya K

2021MB35 Shobikashri S

Under the Guidance of

Mrs. R. Jenovi Rosary Deepa, M.Sc., M.Phil. SET, PGDCA.

**Assistant Professor** 

Department of Mathematics (SF)



Fatima College (Autonomous)

Re-Accredited with "A++" Grade by NAAC (Cycle-4)

Mary Land, Madurai - 625018, Tamil Nadu.

March - 2024

#### R. JENOVI ROSARY DEEPA M.Sc., M.Phil. SET, PGDCA

Assistant Professor.

Department of Mathematics

Fatima College (Autonomous)

Madurai - 625018

#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON FIXED POINTS IN QUASI METRIC SPACE" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision

RANJANI K.S	2021MB30
-------------	----------

RINTHIYA S 2021MB31

SHANMUGAPRIYA K 2021MB34

SHOBIKASHRIS 2021MB35

Place: Madurai

Date: 26 03 2024

SIGNATURE OF THE

INTERNAL EXAMINER

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HEAD OF THE DEPARTMENT

Dr. V. VANITHA

A.Sc., M.Phil, B.Ed., ACIM, SET, Ph.D. Head & Assistant Professor

Head & Assistant Professor Department of Mathematics(SF)

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We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. R. JENOVI ROSARY DEEPA, Assistant Professor, Department of Mathematics (SF), Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics

Date: 26-03-2624

Station. Madurai

K.S. Ranjani Ranjani K.S (2021MB30)

Rinthiya s Rinthiya S (2021MB31)

Shanmugupaiya.k

ShanmugaPriya K (2021MB34)

& show kashi

#### A STUDY ON FUZZY SETS

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment

of the Requirement for the Award of the Degree of

#### BACHELOR OF SCIENCE IN MATHEMATICS

#### Submitted by

(2021MB36) SHURUTHI M

(2021MB37) SNEHA N

(2021MB39) SUDHARSHANA PRIYA S

Under the Guidance of

Mrs. R. JENOVI ROSARY DEEPA, M.Sc, M.Phil, SET, PGDCA

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Fatima College (Autonomous)

Re-Accredited with "A++" Grade by NAAC(Cycle-4)

Mary Land, Madurai - 625018, Tamil Nadu.

March - 2024

## Mrs. R. JENOVI ROSARY DEEPA, M. sc., M. Phil., SET, PGDCA

Assistant Professor,

Department of Mathematics (SF)

Fatima college (Autonomous)

Madurai - 625018

#### CERTIFICATE

This is to certify that the project entitled "A STUDY ON FUZZY SETS" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

SHURUTHI M

(2021MB36)

SNEHA N

(2021MB37)

SUDHARSHANA PRIYA S (2021MB39)

Place: Madurai

Date: 26.03.2024

SIGNATURE OF THE

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HEAD OF THE DEPARTMENT

Dr. V. VANITHA M.Sc., M.Phil, B.Ed., ACIM, SET, Ph.D. Head & Assistant Professor

Department of Mathematics(SF)
Cating College, Madurai - 625018

We do here by declare that this work has been originally carried out by us under the guidance

and supervision of Mrs. R. JENOVI ROSARY DEEPA, Assistant Professor, Department of

Mathematics (SF), Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj

University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in

Mathematics.

Date: 26.03.2024

Station: Madurai

SHURUTHI M (2021MB36) M. Shuruthi

SNEHAN (2021MB37) N. 5 neho-

SUDHARSHANA PRIYAS (2021MB39) & Sudharshana

#### A STUDY ON BASICS OF TOPOLOGY

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of

the Requirement for the Award of the Degree of

#### **BACHELOR OF SCIENCE IN MATHEMATICS**

#### Submitted by

2021MB40 SUJITHA M

2021MB41 SUMITHRA M

2021MB42 SWETHA S

Under the Guidance of

Mrs. R. JENOVI ROSARY DEEPA, M.Sc, M.Phil, SET, PGDCA

Assistant Professor

Department of Mathematics (SF)



Fatima College (Autonomous)

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Mary Land, Madurai – 625018, Tamil Nadu.

MARCH - 2024

#### Mrs. R. JENOVI ROSARY DEEPA, M.Sc., M. Phil., SET, PGDCA

Assistant Professor,

Department of Mathematics(SF)

Fatima College (Autonomous)

Madurai - 625018

#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON BASICS OF TOPOLOGY" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

SUJITHA M

2021MB40

SUMITHRA M

2021MB41

SWETHA S

2021MB42

Place: Madurai

Date: 26.03.2024

SIGNATURE OF THE

INTERNAL EXAMINER

P. 14-26/03/24

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Dr. V. VANITHA
M.Sc, M.Phil, B.Ed, ACIM, SET, Ph.D.
Head & Assistant Professor
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We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. R. JENOVI ROSARY DEEPA, Assistant Professor, Department of Mathematics(SF), Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024 M. SUJITHA (2021MB40) - M. Sujitha.

Station: Madurai M. SUMITHRA (2021MB41) - M. Sumidoru

S. SWETHA (2021MB42) - 5. Swetha

#### A STUDY ON MARKOV CHAIN IN STOCHASTIC PROCESS

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of the Requirement for the Award of the Degree of

#### **BACHELOR OF SCIENCE IN MATHEMATICS**

#### Submitted by

2021MB47 Varshini V

2021MB48 Viji E

2021MB50 Yuva Dharshini M

Under the Guidance of

Mrs. B. VETHAMARY JACQUILNE, M.Sc., M.Phil., B.Ed., PGDCA.

Assistant Professor

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Mary Land, Madurai – 625 018, Tamil Nadu.

MARCH-2024

## Mrs. B. VETHAMARY JACQULINE M.Sc., M.Phil., B.Ed., PGDCA.

Assistant Professor, Department of Mathematics Fatima College (Autonomous) Madurai – 625018

#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON MARKOV CHAIN IN STOCHASTIC PROCESS" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

VARSHINI V

(2021MB47)

VIJI E

(2021MB48)

YUVA DHARSHINI M

(2021MB50)

Place: Madurai

Date: 26.03.2004

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Fatima College, Madurai - 625018

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Date: 26.03.2024

Varshini V (2021MB47)

Voushin

Station: Madurai

E - Vîji Viji E (2021MB48)

Yuva Dharshini M (2021MB50)

M. elwadhowshirt.

#### A STUDY ON APPLICATIONS OF GRAPH THEORY

A Project Submitted to Madurai Kamaraj University in Partial Fulfillment of the Requirement for the Award of the Degree of

#### **BACHELOR OF SCIENCE MATHEMATICS**

#### Submitted by

2021MB66 KARTHIGA N
2021MB67 KAVITHARSHINI T
2021MB69 LAKSHMIPRIYA A
2021MB71 MAHA ALAGUMATHI J

Under the Guidance of

Mrs.J. Annaal Mercy, M.Sc, B.Ed., M.Phil, SET., (Ph.D)

Assistant Professor

Department of Mathematics(SF)



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Mary Land, Madurai – 625018, Tamil Nadu.

MARCH -2024

Mrs.J. Annaal Mercy, M.Sc, B.Ed., M.Phil, SET., (Ph.D)

Assistant Professor,

Department of Mathematics

Fatima College (Autonomous)

Madurai - 625018

#### CERTIFICATE

This to certify that the project entitled, "A STUDY ON APPLICATIONS OF GRAPH THEORY "submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

N.Karthiga 2021MB66

T.Kavitharshini 2021MB67

A.Lakshmi Priya 2021MB69

J.Maha Alagumathi 2021MB71

Place: Madurai

Date: 26.03.2024

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HEAD OF THE DEPARTMENT Dr. V. VANITHA

M.Sc, M.Phil, B.Ed, ACIM, SET, Ph.D Head & Assistant Professor Department of Mathematics(SF) Fatima College, Madurai - 625018

We do here by declare that this work has been originally carried out by us under the guidance and supervision of Mrs. J. Annaal Mercy, Assistant Professor, Department of Mathematics, Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

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N. Kartrige\_ N.KARTHIGA (2021MB66)

T. Kavithelii T.KAVITHARSHINI (2021MB67)

A. LAKSHMIPRIYA (2021MB69)

J. M. . J.MAHA ALAGUMATHI (2021MB71)

## A STUDY ON FUZZY MATRICES

A Project Submitted to Madurai Kamaraj University in Partial fulfillment

of the Requirement for the Award of the Degree of

## BACHELOR OF SCIENCE IN MATHEMATICS

## Submitted by

2021MB100 Abirami R

2021MB101 Hema M

2021MB102 Pamina J

2021MB103 Madhumitha M

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Dr. M. Subha, M.Sc., M.Phil., DCA., ADHT., Ph.D

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Fatima College (Autonomous)

Re-Accredited with "A++" Grade by NAAC (Cycle4)

Mary Land, Madurai- 625018, Tamil Nadu.

March-2024

Dr. M. Subha, M.Sc, M.Phil, DCA, ADHT, Ph.D

Assistant Professor

Department of Mathematics (SF)

Fatima College (Autonomous)

Madurai - 625018

## CERTIFICATE

This to certify that the project entitled, "A STUDY ON FUZZY MATRICES" submitted by the following students, for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

ABIRAMI R 2021MB100

HEMA M 2021MB101

PAMINA J 2021MB102

MADHUMITHA M 2021MB103

Place: Madurai

Date: 26.03.2024

SIGNATURE OF THE

INTERNAL EXAMINER

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Dr. V. VANITHA
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We do hereby declare that this work has been originally carried out by us under the guidance and supervision of Dr. M. Subha, Assistant Professor, Department of Mathematics, Fatima College (Autonomous), Madurai-18 affiliated to Madurai Kamaraj University, Madurai in partial fulfillment for the award of degree of Bachelor of Science in Mathematics.

Date: 26.03.2024

Station: Madurai

RoBinanii Abirami R (2021MB100)

M. Herra Hema M (2021MB101)

> J. Pamina Pamina J (2021MB102)

Madhumitha M (2021MB103)