

# **A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER**

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**

2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Under the Guidance of

**Mrs.A Paulin Mary,**  
M.Sc., M.Ed., M.Phil., PGDCA., SLET.,(Ph.D.),  
Associate Professor and Head  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019) 74<sup>th</sup> Rank in India

Ranking 2020 (NIRF) by MHRD Mary Land, Madurai -  
625018, Tamil Nadu.

**APRIL 2021**



**Mrs.A. Paulin Mary, M.Sc., M.Ed., M.Phil., PGDCA.,SLET.,(Ph.D.)**  
Associate Professor and Head,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

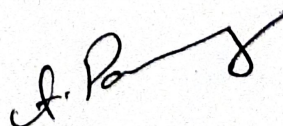
### **CERTIFICATE**

This is to certify that this project entitled **“A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER”** 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.

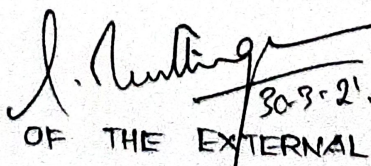
2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Place: Madurai

Date: 29 .03.2020



SIGNATURE OF THE SUPERVISOR



SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER**

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**

2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Under the Guidance of

**Mrs.A Paulin Mary,**  
M.Sc., M.Ed., M.Phil., PGDCA., SLET.,(Ph.D.),  
Associate Professor and Head  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019) 74<sup>th</sup> Rank in India

Ranking 2020 (NIRF) by MHRD Mary Land, Madurai -  
625018, Tamil Nadu.

**APRIL 2021**



**Mrs.A. Paulin Mary, M.Sc., M.Ed., M.Phil., PGDCA.,SLET.,(Ph.D.)**  
Associate Professor and Head,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

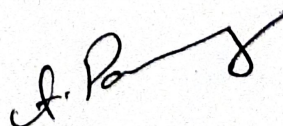
### **CERTIFICATE**

This is to certify that this project entitled **“A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER”** 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.

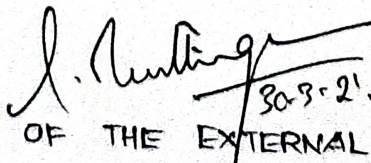
2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Place: Madurai

Date: 29.03.2020



SIGNATURE OF THE SUPERVISOR



SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER**

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**

2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Under the Guidance of

**Mrs.A Paulin Mary,**  
M.Sc., M.Ed., M.Phil., PGDCA., SLET.,(Ph.D.),  
Associate Professor and Head  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019) 74<sup>th</sup> Rank in India

Ranking 2020 (NIRF) by MHRD Mary Land, Madurai -  
625018, Tamil Nadu.

**APRIL 2021**



**Mrs.A. Paulin Mary, M.Sc., M.Ed., M.Phil., PGDCA.,SLET.,(Ph.D.)**  
Associate Professor and Head,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

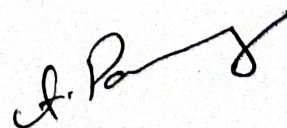
### **CERTIFICATE**

This is to certify that this project entitled **“A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER”** 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.

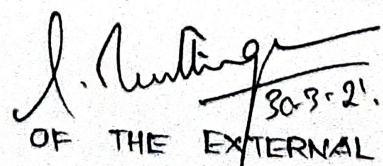
2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Place: Madurai

Date: 29.03.2020



SIGNATURE OF THE SUPERVISOR



SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER**

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**

2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Under the Guidance of

**Mrs.A Paulin Mary,**  
M.Sc., M.Ed., M.Phil., PGDCA., SLET.,(Ph.D.),  
Associate Professor and Head  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019) 74<sup>th</sup> Rank in India

Ranking 2020 (NIRF) by MHRD Mary Land, Madurai -  
625018, Tamil Nadu.

**APRIL 2021**



**Mrs.A. Paulin Mary, M.Sc., M.Ed., M.Phil., PGDCA.,SLET.,(Ph.D.)**  
Associate Professor and Head,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

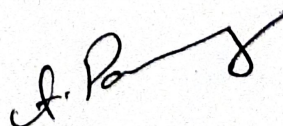
### **CERTIFICATE**

This is to certify that this project entitled **“A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER”** 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.

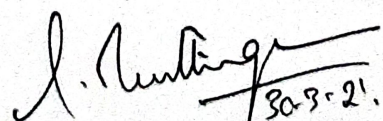
2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Place: Madurai

Date: 29 .03.2020



SIGNATURE OF THE SUPERVISOR



30.3.21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER**

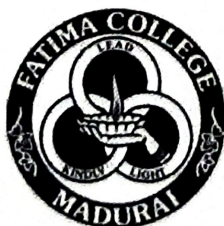
A Project Submitted to Madurai Kamaraj University in Partial Fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Under the Guidance of

**Mrs.A Paulin Mary,**  
M.Sc., M.Ed., M.Phil., PGDCA., SLET.,(Ph.D.),  
Associate Professor and Head  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019) 74<sup>th</sup> Rank in India

Ranking 2020 (NIRF) by MHRD Mary Land, Madurai -  
625018, Tamil Nadu.

**APRIL 2021**



Mrs.A. Paulin Mary, M.Sc., M.Ed., M.Phil., PGDCA.,SLET.,(Ph.D.)  
Associate Professor and Head,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

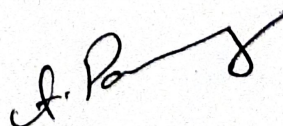
### CERTIFICATE

This is to certify that this project entitled “A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER” 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.

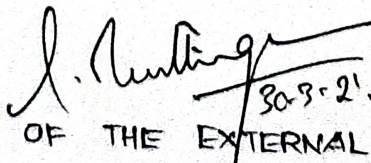
2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Place: Madurai

Date: 29.03.2020



SIGNATURE OF THE SUPERVISOR



SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER**

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**

2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Under the Guidance of

**Mrs.A Paulin Mary,**  
M.Sc., M.Ed., M.Phil., PGDCA., SLET.,(Ph.D.),  
Associate Professor and Head  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019) 74<sup>th</sup> Rank in India

Ranking 2020 (NIRF) by MHRD Mary Land, Madurai -  
625018, Tamil Nadu.

**APRIL 2021**



**Mrs.A. Paulin Mary, M.Sc., M.Ed., M.Phil., PGDCA.,SLET.,(Ph.D.)**  
Associate Professor and Head,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

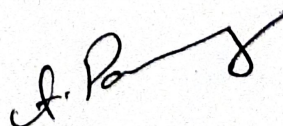
### **CERTIFICATE**

This is to certify that this project entitled **“A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER”** 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.

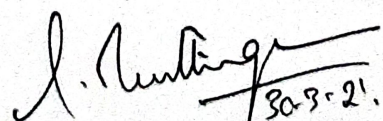
2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Place: Madurai

Date: 29 .03.2020



SIGNATURE OF THE SUPERVISOR



30.3.21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER**

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**

2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Under the Guidance of

**Mrs.A Paulin Mary,**  
M.Sc., M.Ed., M.Phil., PGDCA., SLET.,(Ph.D.),  
Associate Professor and Head  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019) 74<sup>th</sup> Rank in India

Ranking 2020 (NIRF) by MHRD Mary Land, Madurai -  
625018, Tamil Nadu.

**APRIL 2021**



Mrs.A. Paulin Mary, M.Sc., M.Ed., M.Phil., PGDCA.,SLET.,(Ph.D.)  
Associate Professor and Head,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

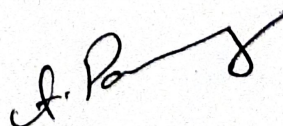
### CERTIFICATE

This is to certify that this project entitled “A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER” 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.

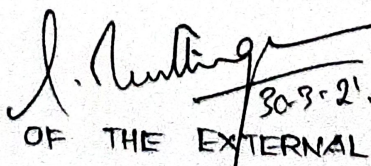
2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Place: Madurai

Date: 29.03.2020



SIGNATURE OF THE SUPERVISOR



SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER**

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**

2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Under the Guidance of

**Mrs.A Paulin Mary,**  
M.Sc., M.Ed., M.Phil., PGDCA., SLET.,(Ph.D.),  
Associate Professor and Head  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019) 74<sup>th</sup> Rank in India

Ranking 2020 (NIRF) by MHRD Mary Land, Madurai -  
625018, Tamil Nadu.

**APRIL 2021**



Mrs.A. Paulin Mary, M.Sc., M.Ed., M.Phil., PGDCA.,SLET.,(Ph.D.)  
Associate Professor and Head,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

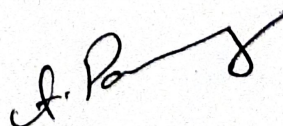
### CERTIFICATE

This is to certify that this project entitled “A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER” 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.

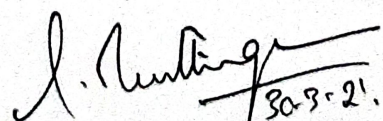
2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTIA.P

Place: Madurai

Date: 29.03.2020



SIGNATURE OF THE SUPERVISOR



30.3.21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER**

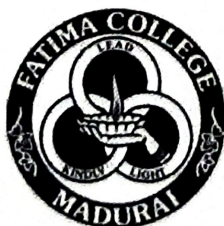
A Project Submitted to Madurai Kamaraj University in Partial Fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Under the Guidance of

**Mrs.A Paulin Mary,**  
M.Sc., M.Ed., M.Phil., PGDCA., SLET.,(Ph.D.),  
Associate Professor and Head  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019) 74<sup>th</sup> Rank in India

Ranking 2020 (NIRF) by MHRD Mary Land, Madurai -  
625018, Tamil Nadu.

**APRIL 2021**



**Mrs.A. Paulin Mary, M.Sc., M.Ed., M.Phil., PGDCA.,SLET.,(Ph.D.)**  
Associate Professor and Head,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

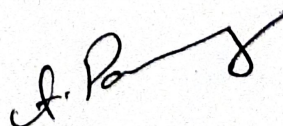
### **CERTIFICATE**

This is to certify that this project entitled **“A STUDY ON PARTIAL DIFFERENTIAL EQUATIONS OF FIRST AND SECOND ORDER”** 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.

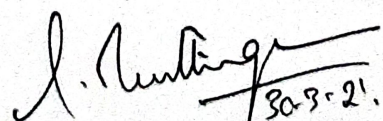
2018M01	AARTHY.S
2018M02	ABARNA.A
2018M03	ABINAYA.S
2018M04	ABIRAMI.T
2018M05	ADHIRAGAVI.M
2018M07	AROCKIA SEBASTINAL MARGITTA.T
2018M08	ATCHAYA.A
2018M10	CATHRINLARA.S
2018M11	DAFNY AUGUSTA.P

Place: Madurai

Date: 29 .03.2020



SIGNATURE OF THE SUPERVISOR



30.3.21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PLANAR GRAPHS AND ITS PROPERTIES**

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

2018M12	Divya Bharathi .G
2018M13	Divya Bharathi . M
2018M15	Divya Shanthi . A
2018M16	Fridolin Yafni . P
2018M17	Gayathri . C
2018M18	German Philo . H
2018M19	Hamsa Priya .V
2018M20	Harini . B
2018M21	Heren Luxy . J

Under the Guidance of

**Mrs. A. Sheela Roselin, M.Sc.,B.Ed., M.Phil., (Ph.D.)**

Assistant Professor

Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019)

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD Mary Land,  
Madurai - 625018, Tamil Nadu.

APRIL 2021



Mrs. A. Sheela Roselin, M.Sc., B.Ed., M.Phil., (Ph.D)

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

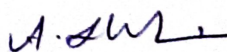
### CERTIFICATE

This is to certify that this project entitled "A STUDY ON PLANAR 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.

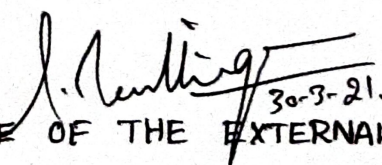
Divya Bharathi .G	2018M12
Divya Bharathi .M	2018M13
Divya Shanthi.A	2018M15
Fridolin Yafni.P	2018M16
Gayathri.C	2018M17
German Philo.H	2018M18
Hamsa Priya.V	2018M19
Harini.B	2018M20
Heren Luxy.J	2018M21

Place: Madurai

Date: 30/03/2021



SIGNATURE OF THE SUPERVISOR



30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PLANAR GRAPHS AND ITS PROPERTIES**

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

2018M12	Divya Bharathi .G
2018M13	Divya Bharathi . M
2018M15	Divya Shanthi . A
2018M16	Fridolin Yafni . P
2018M17	Gayathri . C
2018M18	German Philo . H
2018M19	Hamsa Priya .V
2018M20	Harini . B
2018M21	Heren Luxy . J

Under the Guidance of

**Mrs. A. Sheela Roselin, M.Sc.,B.Ed., M.Phil., (Ph.D.)**

Assistant Professor

Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019)

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD Mary Land,  
Madurai - 625018, Tamil Nadu.

APRIL 2021



Mrs. A. Sheela Roselin, M.Sc., B.Ed., M.Phil., (Ph.D)

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

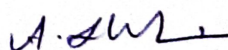
### CERTIFICATE

This is to certify that this project entitled "A STUDY ON PLANAR 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.

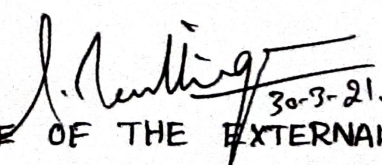
Divya Bharathi .G	2018M12
<u>Divya Bharathi .M</u>	<u>2018M13</u>
Divya Shanthi.A	2018M15
Fridolin Yafni.P	2018M16
Gayathri.C	2018M17
German Philo.H	2018M18
Hamsa Priya.V	2018M19
Harini.B	2018M20
Heren Luxy.J	2018M21

Place: Madurai

Date: 30/03/2021



SIGNATURE OF THE SUPERVISOR



30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PLANAR GRAPHS AND ITS PROPERTIES**

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

2018M12	Divya Bharathi .G
2018M13	Divya Bharathi . M
2018M15	Divya Shanthi . A
2018M16	Fridolin Yafni . P
2018M17	Gayathri . C
2018M18	German Philo . H
2018M19	Hamsa Priya .V
2018M20	Harini . B
2018M21	Heren Luxy . J

Under the Guidance of

**Mrs. A. Sheela Roselin**, M.Sc.,B.Ed., M.Phil., (Ph.D.)  
Assistant Professor  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019)

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD Mary Land,  
Madurai - 625018, Tamil Nadu.

APRIL 2021



Mrs. A. Sheela Roselin, M.Sc., B.Ed., M.Phil., (Ph.D)

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

### CERTIFICATE

This is to certify that this project entitled "A STUDY ON PLANAR 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.

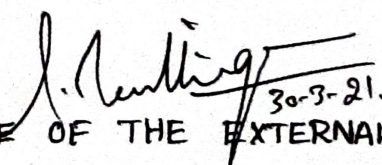
Divya Bharathi .G	2018M12
Divya Bharathi .M	2018M13
Divya Shanthi.A	2018M15
Fridolin Yafni.P	2018M16
Gayathri.C	2018M17
German Philo.H	2018M18
Hamsa Priya.V	2018M19
Harini.B	2018M20
Heren Luxy.J	2018M21

Place: Madurai

Date: 30/03/2021



SIGNATURE OF THE SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PLANAR GRAPHS AND ITS PROPERTIES**

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

2018M12	Divya Bharathi .G
2018M13	Divya Bharathi . M
2018M15	Divya Shanthi . A
2018M16	Fridolin Yafni . P
2018M17	Gayathri . C
2018M18	German Philo . H
2018M19	Hamsa Priya .V
2018M20	Harini . B
2018M21	Heren Luxy . J

Under the Guidance of

**Mrs. A. Sheela Roselin, M.Sc.,B.Ed., M.Phil., (Ph.D.)**

Assistant Professor

Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019)

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD Mary Land,  
Madurai - 625018, Tamil Nadu.

APRIL 2021




Mrs. A. Sheela Roselin, M.Sc., B.Ed., M.Phil., (Ph.D)  
Assistant Professor,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

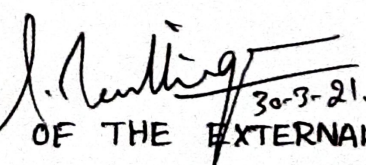
### CERTIFICATE

This is to certify that this project entitled "A STUDY ON PLANAR 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.

Divya Bharathi .G	2018M12
Divya Bharathi .M	2018M13
Divya Shanthi.A	2018M15
Fridolin Yafni.P	2018M16
Gayathri.C	2018M17
German Philo.H	2018M18
Hamsa Priya.V	2018M19
Harini.B	2018M20
Heren Luxy.J	2018M21

Place: Madurai  
Date: 30/03/2021

  
SIGNATURE OF THE SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PLANAR GRAPHS AND ITS PROPERTIES**

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

2018M12	Divya Bharathi .G
2018M13	Divya Bharathi . M
2018M15	Divya Shanthi . A
2018M16	Fridolin Yafni . P
2018M17	Gayathri . C
2018M18	German Philo . H
2018M19	Hamsa Priya .V
2018M20	Harini . B
2018M21	Heren Luxy . J

Under the Guidance of

**Mrs. A. Sheela Roselin, M.Sc.,B.Ed., M.Phil., (Ph.D.)**  
Assistant Professor  
Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019)

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD Mary Land,  
Madurai - 625018, Tamil Nadu.

APRIL 2021



Mrs. A. Sheela Roselin, M.Sc., B.Ed., M.Phil., (Ph.D)

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

### CERTIFICATE

This is to certify that this project entitled "A STUDY ON PLANAR 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.

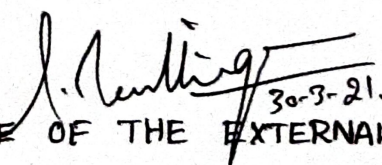
Divya Bharathi .G	2018M12
Divya Bharathi .M	2018M13
Divya Shanthi.A	2018M15
Fridolin Yafni.P	2018M16
Gayathri.C	2018M17
German Philo.H	2018M18
Hamsa Priya.V	2018M19
Harini.B	2018M20
Heren Luxy.J	2018M21

Place: Madurai

Date: 30/03/2021



SIGNATURE OF THE SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PLANAR GRAPHS AND ITS PROPERTIES**

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

2018M12	Divya Bharathi .G
2018M13	Divya Bharathi . M
2018M15	Divya Shanthi . A
2018M16	Fridolin Yafni . P
2018M17	Gayathri . C
2018M18	German Philo . H
2018M19	Hamsa Priya .V
2018M20	Harini . B
2018M21	Heren Luxy . J

Under the Guidance of

**Mrs. A. Sheela Roselin, M.Sc.,B.Ed., M.Phil., (Ph.D.)**

Assistant Professor

Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019)

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD Mary Land,  
Madurai - 625018, Tamil Nadu.

APRIL 2021




Mrs. A. Sheela Roselin, M.Sc., B.Ed., M.Phil., (Ph.D)  
Assistant Professor,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

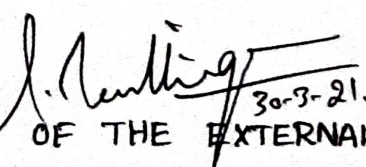
### CERTIFICATE

This is to certify that this project entitled "A STUDY ON PLANAR 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.

Divya Bharathi .G	2018M12
Divya Bharathi .M	2018M13
Divya Shanthi.A	2018M15
Fridolin Yafni.P	2018M16
Gavathri.C	2018M17
German Philo.H	2018M18
Hamsa Priya.V	2018M19
Harini.B	2018M20
Heren Luxy.J	2018M21

Place: Madurai  
Date: 30/03/2021

  
SIGNATURE OF THE SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PLANAR GRAPHS AND ITS PROPERTIES**

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

2018M12	Divya Bharathi .G
2018M13	Divya Bharathi . M
2018M15	Divya Shanthi . A
2018M16	Fridolin Yafni . P
2018M17	Gayathri . C
2018M18	German Philo . H
2018M19	Hamsa Priya .V
2018M20	Harini . B
2018M21	Heren Luxy . J

Under the Guidance of

**Mrs. A. Sheela Roselin, M.Sc.,B.Ed., M.Phil., (Ph.D.)**

Assistant Professor

Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019)

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD Mary Land,  
Madurai - 625018, Tamil Nadu.

APRIL 2021




Mrs. A. Sheela Roselin, M.Sc., B.Ed., M.Phil., (Ph.D)  
Assistant Professor,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

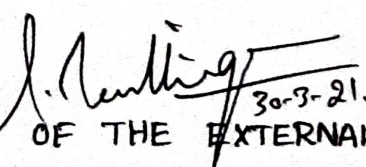
### CERTIFICATE

This is to certify that this project entitled "A STUDY ON PLANAR 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.

Divya Bharathi .G	2018M12
Divya Bharathi .M	2018M13
Divya Shanthi.A	2018M15
Fridolin Yafni.P	2018M16
Gayathri.C	2018M17
German Philo.H	2018M18
Hamsa Priya.V	2018M19
Harini.B	2018M20
Heren Luxy.J	2018M21

Place: Madurai  
Date: 30/03/2021

  
SIGNATURE OF THE SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PLANAR GRAPHS AND ITS PROPERTIES**

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

2018M12	Divya Bharathi .G
2018M13	Divya Bharathi . M
2018M15	Divya Shanthi . A
2018M16	Fridolin Yafni . P
2018M17	Gayathri . C
2018M18	German Philo . H
2018M19	Hamsa Priya .V
2018M20	Harini . B
2018M21	Heren Luxy . J

Under the Guidance of

**Mrs. A. Sheela Roselin, M.Sc.,B.Ed., M.Phil., (Ph.D.)**

Assistant Professor

Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019)

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD Mary Land,  
Madurai - 625018, Tamil Nadu.

APRIL 2021




Mrs. A. Sheela Roselin, M.Sc., B.Ed., M.Phil., (Ph.D)  
Assistant Professor,  
Department of Mathematics,  
Fatima College (Autonomous),  
Madurai — 625018.

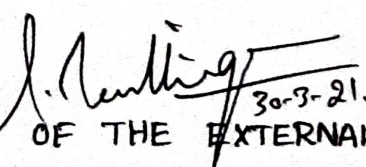
### CERTIFICATE

This is to certify that this project entitled "A STUDY ON PLANAR 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.

Divya Bharathi .G	2018M12
Divya Bharathi .M	2018M13
Divya Shanthi.A	2018M15
Fridolin Yafni.P	2018M16
Gayathri.C	2018M17
German Philo.H	2018M18
Hamsa Priya.V	2018M19
Harini.B	2018M20
Heren Luxy.J	2018M21

Place: Madurai  
Date: 30/03/2021

  
SIGNATURE OF THE SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON PLANAR GRAPHS AND ITS PROPERTIES**

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

2018M12	Divya Bharathi .G
2018M13	Divya Bharathi . M
2018M15	Divya Shanthi . A
2018M16	Fridolin Yafni . P
2018M17	Gayathri . C
2018M18	German Philo . H
2018M19	Hamsa Priya .V
2018M20	Harini . B

2018M21	Heren Luxy . J
---------	----------------

Under the Guidance of

**Mrs. A. Sheela Roselin, M.Sc.,B.Ed., M.Phil., (Ph.D.)**

Assistant Professor

Department of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle) College  
with Potential for Excellence (2004-2019)

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD Mary Land,  
Madurai - 625018, Tamil Nadu.

APRIL 2021



Mrs. A. Sheela Roselin, M.Sc., B.Ed., M.Phil., (Ph.D)

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

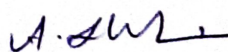
### CERTIFICATE

This is to certify that this project entitled "A STUDY ON PLANAR 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.

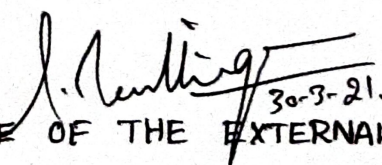
Divya Bharathi .G	2018M12
Divya Bharathi .M	2018M13
Divya Shanthi.A	2018M15
Fridolin Yafni.P	2018M16
Gayathri.C	2018M17
German Philo.H	2018M18
Hamsa Priya.V	2018M19
Harini.B	2018M20
Heren Luxy.J	2018M21

Place: Madurai

Date: 30/03/2021



SIGNATURE OF THE SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FUZZY MATRIX**

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

## **BACHELOR OF SCIENCE IN MATHEMATICS**

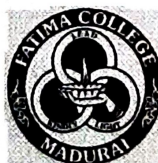
**Submitted By**

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

**Under the Guidance of**

**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics**



**Fatima College[Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence(2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai – 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics,**

**Fatima College(Autonomous),**

**Madurai-625021**

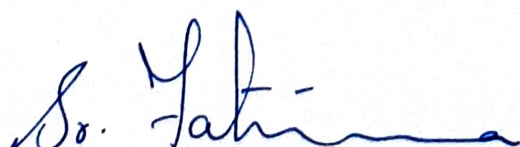
### **CERTIFICATE**


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

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FUZZY MATRIX**

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**

2018M22     D     Janashri

2018M23     S     Jancyrani

2018M24     J.V     Jenifer

2018M25     J     Jercy Agnes Mary

2018M26     J     Jerina Anto

2018M27     B     Jothika

2018M28     J     Julie

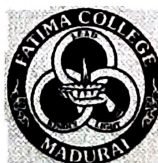
2018M30     T     Kavimukhil

2018M31     V     Kavitharani

**Under the Guidance of**

Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,

Department of Mathematics



**Fatima College[Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence(2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai – 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics,**

**Fatima College(Autonomous),**

**Madurai-625021**

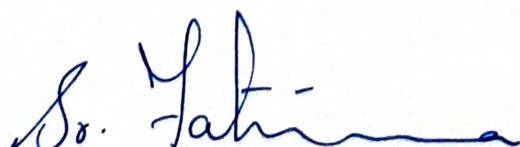
### **CERTIFICATE**


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

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FUZZY MATRIX**

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

## **BACHELOR OF SCIENCE IN MATHEMATICS**

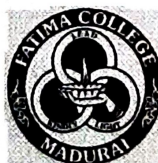
**Submitted By**

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

**Under the Guidance of**

Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,

Department of Mathematics



**Fatima College[Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence(2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai – 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics,**

**Fatima College(Autonomous),**

**Madurai-625021**

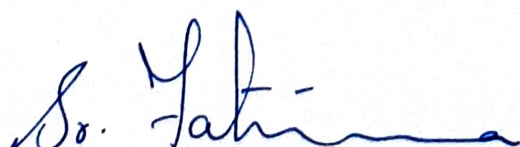
### **CERTIFICATE**


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

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

Place: Madurai

Date: 29.03.2021

  
**SIGNATURE OF THE SUPERVISOR**

  
**SIGNATURE OF THE EXTERNAL EXAMINER**



# **A STUDY ON FUZZY MATRIX**

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

## **BACHELOR OF SCIENCE IN MATHEMATICS**

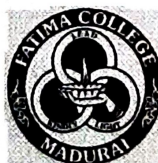
**Submitted By**

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

**Under the Guidance of**

**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics**



**Fatima College[Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence(2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai – 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics,**

**Fatima College(Autonomous),**

**Madurai-625021**

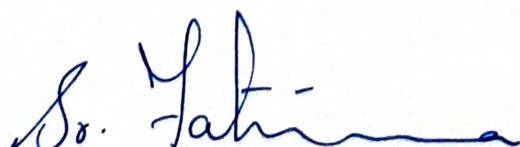
### **CERTIFICATE**


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

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FUZZY MATRIX**

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

## **BACHELOR OF SCIENCE IN MATHEMATICS**

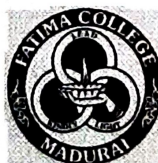
**Submitted By**

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

**Under the Guidance of**

**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics**



**Fatima College[Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence(2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai – 625018, Tamil Nadu.**

**APRIL 2021**



Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,

Department of Mathematics,

Fatima College(Autonomous),

Madurai-625021

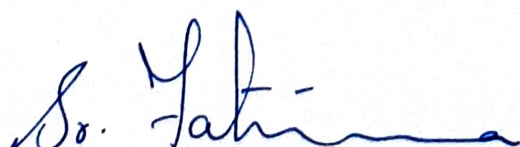
### CERTIFICATE


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

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FUZZY MATRIX**

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

## **BACHELOR OF SCIENCE IN MATHEMATICS**

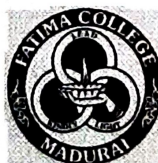
**Submitted By**

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

**Under the Guidance of**

**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics**



**Fatima College[Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence(2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai – 625018, Tamil Nadu.**

**APRIL 2021**



Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,

Department of Mathematics,

Fatima College(Autonomous),

Madurai-625021

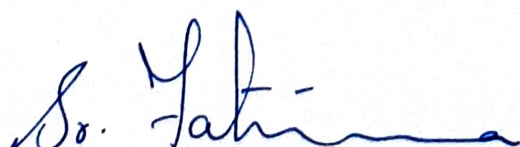
### CERTIFICATE


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

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FUZZY MATRIX**

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

## **BACHELOR OF SCIENCE IN MATHEMATICS**

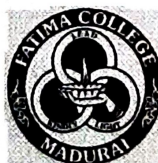
**Submitted By**

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

**Under the Guidance of**

**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics**



**Fatima College[Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence(2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai – 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics,**

**Fatima College(Autonomous),**

**Madurai-625021**

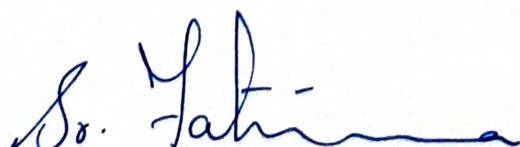
### **CERTIFICATE**


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

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

Place: Madurai

Date: 29.03.2021

  
**SIGNATURE OF THE SUPERVISOR**

  
**SIGNATURE OF THE EXTERNAL EXAMINER**



# **A STUDY ON FUZZY MATRIX**

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

## **BACHELOR OF SCIENCE IN MATHEMATICS**

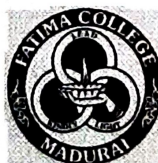
**Submitted By**

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

**Under the Guidance of**

**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics**



**Fatima College[Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence(2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai – 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics,**

**Fatima College(Autonomous),**

**Madurai-625021**

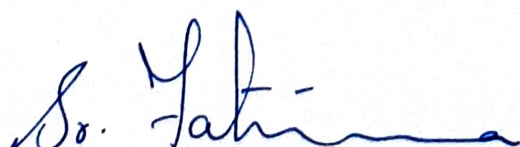
### **CERTIFICATE**


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

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

Place: Madurai

Date: 29.03.2021

  
**SIGNATURE OF THE SUPERVISOR**

  
**SIGNATURE OF THE EXTERNAL EXAMINER**



# **A STUDY ON FUZZY MATRIX**

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

## **BACHELOR OF SCIENCE IN MATHEMATICS**

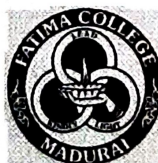
**Submitted By**

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

**Under the Guidance of**

**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics**



**Fatima College[Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence(2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai – 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Sr. M. Fatima Mary, M.Sc., M.Phil., Ph.D.,**

**Department of Mathematics,**

**Fatima College(Autonomous),**

**Madurai-625021**

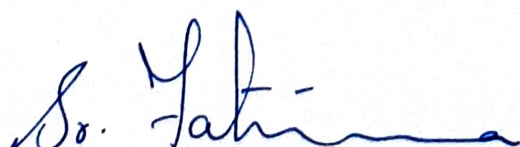
### **CERTIFICATE**


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

2018M22	D	Janashri
2018M23	S	Jancyrani
2018M24	J.V	Jenifer
2018M25	J	Jercy Agnes Mary
2018M26	J	Jerina Anto
2018M27	B	Jothika
2018M28	J	Julie
2018M30	T	Kavimukhil
2018M31	V	Kavitharani

Place: Madurai

Date: 29.03.2021

  
**SIGNATURE OF THE SUPERVISOR**

  
**SIGNATURE OF THE EXTERNAL EXAMINER**



# **A STUDY ON NEW MATHEMATICAL MODELING FOR 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**

2018M32	K. Kaviya
2018M33	P. Keerthana
2018M34	S. Kiruba
2018M35	K. Kiruthika
2018M36	P. Maria Idhaya
2018M37	I. Maria Karoline Sevitha
2018M38	A. Merlin Bownciya
2018M39	S. Michline Anisha

Under the Guidance of

Dr. C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHR Mary Land, Madurai-625018, Tamil Nadu.

MARCH 2021



Dr . C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,  
Assistant Professor,  
Department Of Mathematics,  
Fatima College [Autonomous],  
Madurai-625 018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

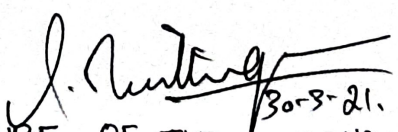
K. Kaviya	2018M32
P. Keerthana	2018M33
S. Kiruba	2018M34
K. Kiruthika	2018M35
P. Maria Idhaya	2018M36
I. Maria Karoline Sevitha	2018M37
A. Merlin Bownciya	2018M38
S. Michline Anisha	2018M39

PLACE: Madurai

DATE: 29.03.2021

C. P. S.

SIGNATURE OF SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON NEW MATHEMATICAL MODELING FOR 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**

2018M32	K. Kaviya
2018M33	P. Keerthana
2018M34	S. Kiruba
2018M35	K. Kiruthika
2018M36	P. Maria Idhaya
2018M37	I. Maria Karoline Sevitha
2018M38	A. Merlin Bownciya
2018M39	S. Michline Anisha

Under the Guidance of

Dr. C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHR Mary Land, Madurai-625018, Tamil Nadu.

MARCH 2021



Dr . C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,  
Assistant Professor,  
Department Of Mathematics,  
Fatima College [Autonomous],  
Madurai-625 018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

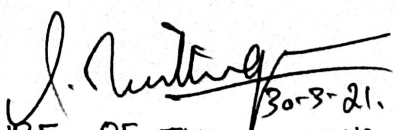
K. Kaviya	2018M32
P. Keerthana	2018M33
S. Kiruba	2018M34
K. Kiruthika	2018M35
P. Maria Idhaya	2018M36
I. Maria Karoline Sevitha	2018M37
A. Merlin Bownciya	2018M38
S. Michline Anisha	2018M39

PLACE: Madurai

DATE: 29.03.2021

C. P. S.

SIGNATURE OF SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON NEW MATHEMATICAL MODELING FOR 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**

2018M32	K. Kaviya
2018M33	P. Keerthana
2018M34	S. Kiruba
2018M35	K. Kiruthika
2018M36	P. Maria Idhaya
2018M37	I. Maria Karoline Sevitha
2018M38	A. Merlin Bownciya
2018M39	S. Michline Anisha

Under the Guidance of

Dr. C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHR Mary Land, Madurai-625018, Tamil Nadu.

MARCH 2021



Dr . C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,  
Assistant Professor,  
Department Of Mathematics,  
Fatima College [Autonomous],  
Madurai-625 018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

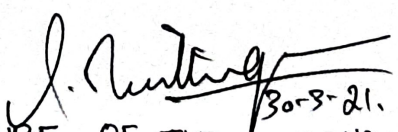
K. Kaviya	2018M32
P. Keerthana	2018M33
S. Kiruba	2018M34
K. Kiruthika	2018M35
P. Maria Idhaya	2018M36
I. Maria Karoline Sevitha	2018M37
A. Merlin Bownciya	2018M38
S. Michline Anisha	2018M39

PLACE: Madurai

DATE: 29.03.2021

C. P. S.

SIGNATURE OF SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON NEW MATHEMATICAL MODELING FOR 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**

2018M32	K. Kaviya
2018M33	P. Keerthana
2018M34	S. Kiruba
2018M35	K. Kiruthika
2018M36	P. Maria Idhaya
2018M37	I. Maria Karoline Sevitha
2018M38	A. Merlin Bownciya
2018M39	S. Michline Anisha

Under the Guidance of

Dr. C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHR Mary Land, Madurai-625018, Tamil Nadu.

MARCH 2021



Dr . C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,  
Assistant Professor,  
Department Of Mathematics,  
Fatima College [Autonomous],  
Madurai-625 018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

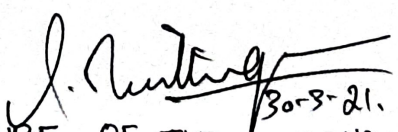
K. Kaviya	2018M32
P. Keerthana	2018M33
S. Kiruba	2018M34
K. Kiruthika	2018M35
P. Maria Idhaya	2018M36
I. Maria Karoline Sevitha	2018M37
A. Merlin Bownciya	2018M38
S. Michline Anisha	2018M39

PLACE: Madurai

DATE: 29.03.2021

C. P. S.

SIGNATURE OF SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON NEW MATHEMATICAL MODELING FOR 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**

2018M32	K. Kaviya
2018M33	P. Keerthana
2018M34	S. Kiruba
2018M35	K. Kiruthika
2018M36	P. Maria Idhaya
2018M37	I. Maria Karoline Sevitha
2018M38	A. Merlin Bownciya
2018M39	S. Michline Anisha

### **Under the Guidance of**

**Dr. C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,**

**Assistant professor,**

**Department Of Mathematics**



**Fatima College [Autonomous]**

**Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)**

**College with potential for excellence (2004-2021)**

**74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHR Mary Land, Madurai-625018, Tamil Nadu.**

**MARCH 2021**



Dr . C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,  
Assistant Professor,  
Department Of Mathematics,  
Fatima College [Autonomous],  
Madurai-625 018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

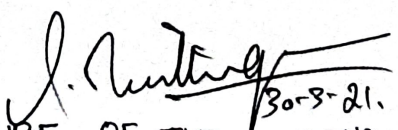
K. Kaviya	2018M32
P. Keerthana	2018M33
S. Kiruba	2018M34
K. Kiruthika	2018M35
P. Maria Idhaya	2018M36
I. Maria Karoline Sevitha	2018M37
A. Merlin Bownciya	2018M38
S. Michline Anisha	2018M39

PLACE: Madurai

DATE: 29.03.2021

C. P. S.

SIGNATURE OF SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON NEW MATHEMATICAL MODELING FOR 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**

2018M32	K. Kaviya
2018M33	P. Keerthana
2018M34	S. Kiruba
2018M35	K. Kiruthika
2018M36	P. Maria Idhaya
2018M37	I. Maria Karoline Sevitha
2018M38	A. Merlin Bownciya
2018M39	S. Michline Anisha

Under the Guidance of

Dr. C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHR Mary Land, Madurai-625018, Tamil Nadu.

MARCH 2021



Dr . C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,  
Assistant Professor,  
Department Of Mathematics,  
Fatima College [Autonomous],  
Madurai-625 018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

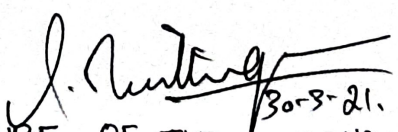
K. Kaviya	2018M32
P. Keerthana	2018M33
S. Kiruba	2018M34
K. Kiruthika	2018M35
P. Maria Idhaya	2018M36
I. Maria Karoline Sevitha	2018M37
A. Merlin Bownciya	2018M38
S. Michline Anisha	2018M39

PLACE: Madurai

DATE: 29.03.2021

C. P. S.

SIGNATURE OF SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON NEW MATHEMATICAL MODELING FOR 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**

2018M32	K. Kaviya
2018M33	P. Keerthana
2018M34	S. Kiruba
2018M35	K. Kiruthika
2018M36	P. Maria Idhaya
2018M37	I. Maria Karoline Sevitha
2018M38	A. Merlin Bownciya
2018M39	S. Michline Anisha

Under the Guidance of

Dr. C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHR Mary Land, Madurai-625018, Tamil Nadu.

MARCH 2021



Dr . C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,  
Assistant Professor,  
Department Of Mathematics,  
Fatima College [Autonomous],  
Madurai-625 018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

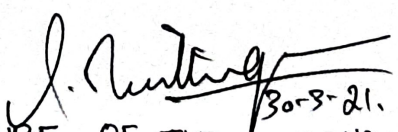
K. Kaviya	2018M32
P. Keerthana	2018M33
S. Kiruba	2018M34
K. Kiruthika	2018M35
P. Maria Idhaya	2018M36
I. Maria Karoline Sevitha	2018M37
A. Merlin Bownciya	2018M38
S. Michline Anisha	2018M39

PLACE: Madurai

DATE: 29.03.2021

C. P. S.

SIGNATURE OF SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON NEW MATHEMATICAL MODELING FOR 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**

2018M32	K. Kaviya
2018M33	P. Keerthana
2018M34	S. Kiruba
2018M35	K. Kiruthika
2018M36	P. Maria Idhaya
2018M37	I. Maria Karoline Sevitha
2018M38	A. Merlin Bownciya
2018M39	S. Michline Anisha

Under the Guidance of

Dr. C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHR Mary Land, Madurai-625018, Tamil Nadu.

MARCH 2021



Dr . C. Prasanna Devi, M.Sc., M.Phil., B.Ed., Ph.D.,  
Assistant Professor,  
Department Of Mathematics,  
Fatima College [Autonomous],  
Madurai-625 018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.


K. Kaviya	2018M32
P. Keerthana	2018M33
S. Kiruba	2018M34
K. Kiruthika	2018M35
P. Maria Idhaya	2018M36
I. Maria Karoline Sevitha	2018M37
A. Merlin Bownciya	2018M38
S. Michline Anisha	2018M39

PLACE: Madurai

DATE: 29.03.2021

C. P. S.

SIGNATURE OF SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES**

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**

2018M40	M. Mohana Prabha
2018M41	P. Nandhini
2018M42	J. Nirmal Shiny Antonita
2018M43	M. Nishalini
2018M44	R. Nithisha Vijayanthi
2018M45	S. Nivashini
2018M46	S. Pragatheeswari
2018M47	J. Pramila

Under the Guidance of

Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant professor

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

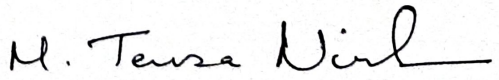
## CERTIFICATE

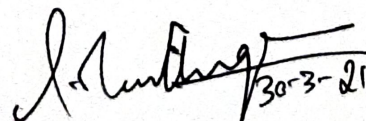
This is to certify that this project entitled "A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES" submitted by the following students for the award of the degree of Bachelor's Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

M. Mohana Prabha	2018M40
P. Nandhini	2018M41
J. Nirmal Shiny Antonita	2018M42
M. Nishalini	2018M43
R. Nithisha Vijayanthi	2018M44
S. Nivashini	2018M45
S. Pragatheeswari	2018M46
J. Pramila	2018M47

Place: Madurai

Date: 29.03.2020

  
SIGNATURE OF SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES**

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**

2018M40	M. Mohana Prabha
2018M41	P. Nandhini
2018M42	J. Nirmal Shiny Antonita
2018M43	M. Nishalini
2018M44	R. Nithisha Vijayanthi
2018M45	S. Nivashini
2018M46	S. Pragatheeswari
2018M47	J. Pramila

Under the Guidance of

Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant professor

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

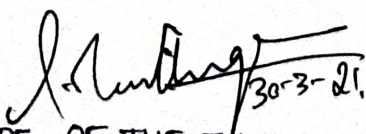
This is to certify that this project entitled "A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES" submitted by the following students for the award of the degree of Bachelor's Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

M. Mohana Prabha	2018M40
P. Nandhini	2018M41
J. Nirmal Shiny Antonita	2018M42
M. Nishalini	2018M43
R. Nithisha Vijayanthi	2018M44
S. Nivashini	2018M45
S. Pragatheeswari	2018M46
J. Pramila	2018M47

Place: Madurai

Date: 29.03.2020

M. Teresa Nirmala  
SIGNATURE OF SUPERVISOR

  
30-3-21  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES**

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**

2018M40	M. Mohana Prabha
2018M41	P. Nandhini
2018M42	J. Nirmal Shiny Antonita
2018M43	M. Nishalini
2018M44	R. Nithisha Vijayanathi
2018M45	S. Nivashini
2018M46	S. Pragatheeswari
2018M47	J. Pramila

Under the Guidance of

Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant professor

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

## CERTIFICATE

This is to certify that this project entitled "A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES" submitted by the following students for the award of the degree of Bachelor's Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

M. Mohana Prabha	2018M40
P. Nandhini	2018M41
J. Nirmal Shiny Antonita	2018M42
M. Nishalini	2018M43
R. Nithisha Vijayanthi	2018M44
S. Nivashini	2018M45
S. Pragatheeswari	2018M46
J. Pramila	2018M47

Place: Madurai

Date: 29.03.2020

M. Teresa Nirmala  
SIGNATURE OF SUPERVISOR

J. Nirmal Shiny Antonita  
30-3-21  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES**

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**

2018M40	M. Mohana Prabha
2018M41	P. Nandhini
2018M42	J. Nirmal Shiny Antonita
2018M43	M. Nishalini
2018M44	R. Nithisha Vijayanathi
2018M45	S. Nivashini
2018M46	S. Pragatheeswari
2018M47	J. Pramila

Under the Guidance of

Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant professor

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

## CERTIFICATE

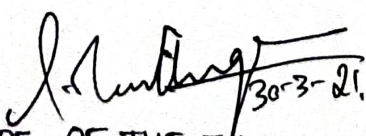
This is to certify that this project entitled "A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES" submitted by the following students for the award of the degree of Bachelor's Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

M. Mohana Prabha	2018M40
P. Nandhini	2018M41
J. Nirmal Shiny Antonita	2018M42
M. Nishalini	2018M43
R. Nithisha Vijayanthi	2018M44
S. Nivashini	2018M45
S. Pragatheeswari	2018M46
J. Pramila	2018M47

Place: Madurai

Date: 29.03.2020

M. Teresa Nirmala  
SIGNATURE OF SUPERVISOR

  
30-3-21  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES**

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**

2018M40	M. Mohana Prabha
2018M41	P. Nandhini
2018M42	J. Nirmal Shiny Antonita
2018M43	M. Nishalini
2018M44	R. Nithisha Vijayanthi
2018M45	S. Nivashini
2018M46	S. Pragatheeswari
2018M47	J. Pramila

Under the Guidance of

Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant professor

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

## CERTIFICATE

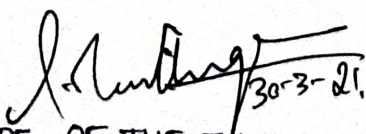
This is to certify that this project entitled "A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES" submitted by the following students for the award of the degree of Bachelor's Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

M. Mohana Prabha	2018M40
P. Nandhini	2018M41
J. Nirmal Shiny Antonita	2018M42
M. Nishalini	2018M43
R. Nithisha Vijayanthi	2018M44
S. Nivashini	2018M45
S. Pragatheeswari	2018M46
J. Pramila	2018M47

Place: Madurai

Date: 29.03.2020

M. Teresa Nirmala  
SIGNATURE OF SUPERVISOR

  
30-3-21  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES**

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**

2018M40	M. Mohana Prabha
2018M41	P. Nandhini
2018M42	J. Nirmal Shiny Antonita
2018M43	M. Nishalini
2018M44	R. Nithisha Vijayanathi
2018M45	S. Nivashini
2018M46	S. Pragatheeswari
2018M47	J. Pramila

Under the Guidance of

Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant professor

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

## CERTIFICATE

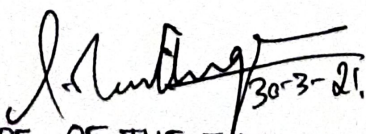
This is to certify that this project entitled "A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES" submitted by the following students for the award of the degree of Bachelor's Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

M. Mohana Prabha	2018M40
P. Nandhini	2018M41
J. Nirmal Shiny Antonita	2018M42
M. Nishalini	2018M43
R. Nithisha Vijayanthi	2018M44
S. Nivashini	2018M45
S. Pragatheeswari	2018M46
J. Pramila	2018M47

Place: Madurai

Date: 29.03.2020

M. Teresa Nirmala  
SIGNATURE OF SUPERVISOR

  
30-3-21  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES**

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**

2018M40	M. Mohana Prabha
2018M41	P. Nandhini
2018M42	J. Nirmal Shiny Antonita
2018M43	M. Nishalini
2018M44	R. Nithisha Vijayanthi
2018M45	S. Nivashini
2018M46	S. Pragatheeswari
2018M47	J. Pramila

Under the Guidance of

Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant professor

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

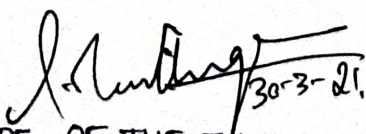
This is to certify that this project entitled "A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES" submitted by the following students for the award of the degree of Bachelor's Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

M. Mohana Prabha	2018M40
P. Nandhini	2018M41
J. Nirmal Shiny Antonita	2018M42
M. Nishalini	2018M43
R. Nithisha Vijayanthi	2018M44
S. Nivashini	2018M45
S. Pragatheeswari	2018M46
J. Pramila	2018M47

Place: Madurai

Date: 29.03.2020

M. Teresa Nirmala  
SIGNATURE OF SUPERVISOR

  
30-3-21  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES**

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**

2018M40	M. Mohana Prabha
2018M41	P. Nandhini
2018M42	J. Nirmal Shiny Antonita
2018M43	M. Nishalini
2018M44	R. Nithisha Vijayanathi
2018M45	S. Nivashini
2018M46	S. Pragatheeswari
2018M47	J. Pramila

Under the Guidance of

Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant professor

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Mrs. M. Teresa Nirmala M.Sc., M.Phil., (Ph.D)

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

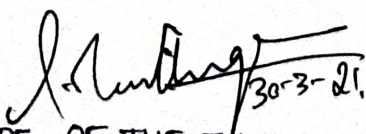
This is to certify that this project entitled "A STUDY ON SIMULTANEOUS AND SEQUENTIAL GAMES" submitted by the following students for the award of the degree of Bachelor's Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

M. Mohana Prabha	2018M40
P. Nandhini	2018M41
J. Nirmal Shiny Antonita	2018M42
M. Nishalini	2018M43
R. Nithisha Vijayanthi	2018M44
S. Nivashini	2018M45
S. Pragatheeswari	2018M46
J. Pramila	2018M47

Place: Madurai

Date: 29.03.2020

M. Teresa Nirmala  
SIGNATURE OF SUPERVISOR

  
30-3-21  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FABULOUS FIBONACCI APPLICATIONS**

A Project Submitted to Madurai Kamaraj University Partial fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M48	PREETHIKA K.
2018M49	PRIYADHARSHINI T.
2018M50	RAJINA V.B
2018M52	RANI S.
2018M53	RASMI R.
2018M54	RITHIKA M.
2018M55	SABAR NISHA S.
2018M56	SANGAVI S.

Under the guidance of

**Dr.V.Vanitha.,M.Sc.,M.Phil.,B.Ed.,SET.,Ph.D.**

Assistant Professor

Department of Mathematics



**Fatima College [Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence (2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai - 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Mrs. V. Vanitha M.sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

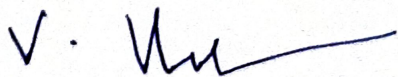
### CERTIFICATE

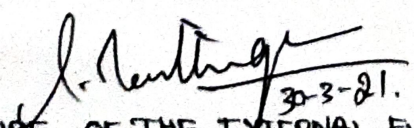
This is to certify that this project entitled "A STUDY ON FABULOUS FIBONACCI APPLICATIONS" submitted by the following students for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

PREETHIKA K.	2018M48
PRIYADHARSHINI T.	2018M49
RAJINA V.B	2018M50
RANI S.	2018M52
RASMI R.	2018M53
RITHIKA M.	2018M54
SABAR NISHA S.	2018M55
SANGAVI S.	2018M56

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FABULOUS FIBONACCI APPLICATIONS**

A Project Submitted to Madurai Kamaraj University Partial fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M48	PREETHIKA K.
2018M49	PRIYADHARSHINI T.
2018M50	RAJINA V.B
2018M52	RANI S.
2018M53	RASMI R.
2018M54	RITHIKA M.
2018M55	SABAR NISHA S.
2018M56	SANGAVI S.

Under the guidance of

**Dr.V.Vanitha.,M.Sc.,M.Phil.,B.Ed.,SET.,Ph.D.**

Assistant Professor

Department of Mathematics



**Fatima College [Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence (2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai - 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Mrs. V. Vanitha M.sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

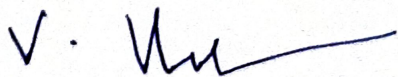
### CERTIFICATE

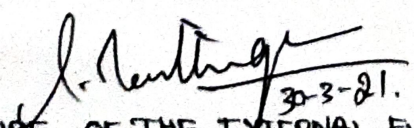
This is to certify that this project entitled "A STUDY ON FABULOUS FIBONACCI APPLICATIONS" submitted by the following students for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

PREETHIKA K.	2018M48
PRIYADHARSHINI T.	2018M49
RAJINA V.B	2018M50
RANI S.	2018M52
RASMI R.	2018M53
RITHIKA M.	2018M54
SABAR NISHA S.	2018M55
SANGAVI S.	2018M56

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FABULOUS FIBONACCI APPLICATIONS**

A Project Submitted to Madurai Kamaraj University Partial fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M48	PREETHIKA K.
2018M49	PRIYADHARSHINI T.
2018M50	RAJINA V.B
2018M52	RANI S.
2018M53	RASMI R.
2018M54	RITHIKA M.
2018M55	SABAR NISHA S.
2018M56	SANGAVI S.

Under the guidance of

**Dr. V. Vanitha., M.Sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor

Department of Mathematics



**Fatima College [Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence (2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai - 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Mrs. V. Vanitha M.sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

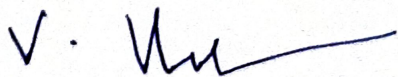
### CERTIFICATE

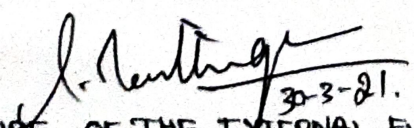
This is to certify that this project entitled "A STUDY ON FABULOUS FIBONACCI APPLICATIONS" submitted by the following students for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

PREETHIKA K.	2018M48
PRIYADHARSHINI T.	2018M49
RAJINA V.B	2018M50
RANI S.	2018M52
RASMI R.	2018M53
RITHIKA M.	2018M54
SABAR NISHA S.	2018M55
SANGAVI S.	2018M56

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FABULOUS FIBONACCI APPLICATIONS**

A Project Submitted to Madurai Kamaraj University Partial fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M48	PREETHIKA K.
2018M49	PRIYADHARSHINI T.
2018M50	RAJINA V.B
2018M52	RANI S.
2018M53	RASMI R.
2018M54	RITHIKA M.
2018M55	SABAR NISHA S.
2018M56	SANGAVI S.

Under the guidance of

**Dr. V. Vanitha., M.Sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor

Department of Mathematics



**Fatima College [Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence (2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai - 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Mrs. V. Vanitha M.sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

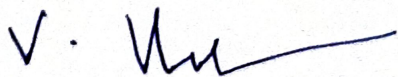
### CERTIFICATE

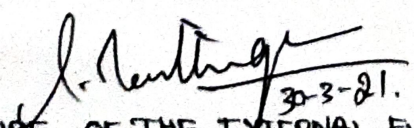
This is to certify that this project entitled "A STUDY ON FABULOUS FIBONACCI APPLICATIONS" submitted by the following students for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

PREETHIKA K.	2018M48
PRIYADHARSHINI T.	2018M49
RAJINA V.B	2018M50
RANI S.	2018M52
RASMI R.	2018M53
RITHIKA M.	2018M54
SABAR NISHA S.	2018M55
SANGAVI S.	2018M56

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FABULOUS FIBONACCI APPLICATIONS**

A Project Submitted to Madurai Kamaraj University Partial fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M48	PREETHIKA K.
2018M49	PRIYADHARSHINI T.
2018M50	RAJINA V.B
2018M52	RANI S.
2018M53	RASMI R.
2018M54	RITHIKA M.
2018M55	SABAR NISHA S.
2018M56	SANGAVI S.

Under the guidance of

**Dr.V.Vanitha.,M.Sc.,M.Phil.,B.Ed.,SET.,Ph.D.**

Assistant Professor

Department of Mathematics



**Fatima College [Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence (2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai - 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Mrs. V. Vanitha M.sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

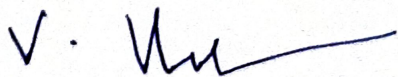
### CERTIFICATE

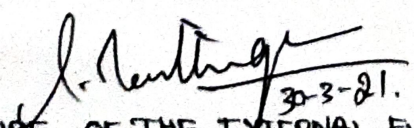
This is to certify that this project entitled "A STUDY ON FABULOUS FIBONACCI APPLICATIONS" submitted by the following students for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

PREETHIKA K.	2018M48
PRIYADHARSHINI T.	2018M49
RAJINA V.B	2018M50
RANI S.	2018M52
RASMI R.	2018M53
RITHIKA M.	2018M54
SABAR NISHA S.	2018M55
SANGAVI S.	2018M56

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FABULOUS FIBONACCI APPLICATIONS**

A Project Submitted to Madurai Kamaraj University Partial fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M48	PREETHIKA K.
2018M49	PRIYADHARSHINI T.
2018M50	RAJINA V.B
2018M52	RANI S.
2018M53	RASMI R.
2018M54	RITHIKA M.
2018M55	SABAR NISHA S.
2018M56	SANGAVI S.

Under the guidance of

**Dr.V.Vanitha.,M.Sc.,M.Phil.,B.Ed.,SET.,Ph.D.**

Assistant Professor

Department of Mathematics



**Fatima College [Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence (2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai - 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Mrs. V. Vanitha M.sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

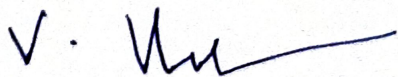
### CERTIFICATE

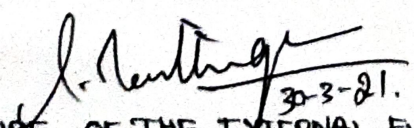
This is to certify that this project entitled "A STUDY ON FABULOUS FIBONACCI APPLICATIONS" submitted by the following students for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

PREETHIKA K.	2018M48
PRIYADHARSHINI T.	2018M49
RAJINA V.B	2018M50
RANI S.	2018M52
RASMI R.	2018M53
RITHIKA M.	2018M54
SABAR NISHA S.	2018M55
SANGAVI S.	2018M56

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FABULOUS FIBONACCI APPLICATIONS**

A Project Submitted to Madurai Kamaraj University Partial fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M48	PREETHIKA K.
2018M49	PRIYADHARSHINI T.
2018M50	RAJINA V.B
2018M52	RANI S.
2018M53	RASMI R.
2018M54	RITHIKA M.
2018M55	SABAR NISHA S.
2018M56	SANGAVI S.

Under the guidance of

**Dr.V.Vanitha.,M.Sc.,M.Phil.,B.Ed.,SET.,Ph.D.**

Assistant Professor

Department of Mathematics



**Fatima College [Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence (2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai - 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Mrs. V. Vanitha M.sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

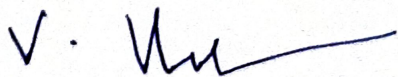
### CERTIFICATE

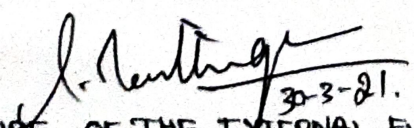
This is to certify that this project entitled "A STUDY ON FABULOUS FIBONACCI APPLICATIONS" submitted by the following students for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

PREETHIKA K.	2018M48
PRIYADHARSHINI T.	2018M49
RAJINA V.B	2018M50
RANI S.	2018M52
RASMI R.	2018M53
RITHIKA M.	2018M54
SABAR NISHA S.	2018M55
SANGAVI S.	2018M56

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FABULOUS FIBONACCI APPLICATIONS**

A Project Submitted to Madurai Kamaraj University Partial fulfillment  
of the Requirement for the Award of Degree of  
**BACHELOR OF SCIENCE IN MATHEMATICS**

## **Submitted by**

2018M48	PREETHIKA K.
2018M49	PRIYADHARSHINI T.
2018M50	RAJINA V.B
2018M52	RANI S.
2018M53	RASMI R.
2018M54	RITHIKA M.
2018M55	SABAR NISHA S.
2018M56	SANGAVI S.

Under the guidance of

**Dr.V.Vanitha.,M.Sc.,M.Phil.,B.Ed.,SET.,Ph.D.**

Assistant Professor

Department of Mathematics



**Fatima College [Autonomous]**

**Re-Accredited with 'A' Grade by NAAC (3<sup>rd</sup> Cycle)**

**College with Potential for Excellence (2004-2019)**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Mary Land, Madurai - 625018, Tamil Nadu.**

**APRIL 2021**



**Dr. Mrs. V. Vanitha M.sc., M.Phil., B.Ed., SET., Ph.D.**

Assistant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai — 625018.

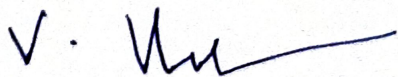
### CERTIFICATE

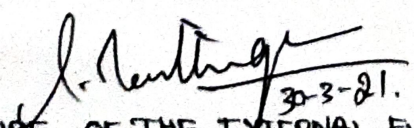
This is to certify that this project entitled "A STUDY ON FABULOUS FIBONACCI APPLICATIONS" submitted by the following students for the award of the degree of Bachelor of Science in Mathematics is a bonafide record of work carried out by them under my guidance and supervision.

PREETHIKA K.	2018M48
PRIYADHARSHINI T.	2018M49
RAJINA V.B	2018M50
RANI S.	2018M52
RASMI R.	2018M53
RITHIKA M.	2018M54
SABAR NISHA S.	2018M55
SANGAVI S.	2018M56

Place: Madurai

Date: 29.03.2021

  
SIGNATURE OF THE SUPERVISOR

  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON INTUITIONISTIC FUZZY ALGEBRA**

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**

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

Under the Guidance of

Ms. A. SAHAYA ROSELINE DIVYA, M.Sc., B.Ed., M.Phil.,(Ph.d.),.

Assitant Professor

Department of Mathematics



Fatima College (Autonomous)

Re-Accredited with 'A' Grade by NAAC

College with potential for Excellence ( 2004-2021)

74<sup>th</sup> Rank in India Ranking 2021 ( NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu

**April 2021**



**Ms. A. SahayaRoselineDivya, M.Sc., B.Ed., M.Phil.,(Ph.D.,)**

Assitant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai-625018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**” submitted by the following students for the award of the degree of Bachelor of science in Mathematics is a bonafide record of work carried by them under my guidance and supervision.

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

Place : Madurai

Date: 29 - 03 - 2024

*A. Sahaya Roseline Divya*  
SIGNATURE OF SUPERVISOR

*J. L. L. L. L.*  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**

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**

2018M57 M.Selvisaroni

2018M58 P.Shanthi

2018M59 A.Shiny

2018M60 L.Sibi Marian

2018M61 G.Sivashankari

2018M62 R.Sivasangari

2018M63 R.Sneka

2018M64 S.Sureka

Under the Guidance of

Ms. A. SAHAYA ROSELINE DIVYA, M.Sc., B.Ed., M.Phil.,(Ph.d.),.

Assitant Professor

Department of Mathematics



Fatima College (Autonomous)

Re-Accredited with 'A' Grade by NAAC

College with potential for Excellence ( 2004-2021)

74<sup>th</sup> Rank in India Ranking 2021 ( NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu

**April 2021**



**Ms. A. SahayaRoselineDivya, M.Sc., B.Ed., M.Phil.,(Ph.D.,)**

Assitant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai-625018.

### **CERTIFICATE**

This is to certify that this project entitled “**A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**” submitted by the following students for the award of the degree of Bachelor of science in Mathematics is a bonafide record of work carried by them under my guidance and supervision.

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

**Place :** Madurai

**Date:** 29 - 03 - 2024

*A. Sahaya Roseline Divya*  
SIGNATURE OF SUPERVISOR

*L. Sibi Marian*  
30-3-24.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**

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**

2018M57 M.Selvisaroni

2018M58 P.Shanthi

2018M59 A.Shiny

2018M60 L.Sibi Marian

2018M61 G.Sivashankari

2018M62 R.Sivasangari

2018M63 R.Sneka

2018M64 S.Sureka

Under the Guidance of

Ms. A. SAHAYA ROSELINE DIVYA, M.Sc., B.Ed., M.Phil.,(Ph.d.),.

Assitant Professor

Department of Mathematics



Fatima College (Autonomous)

Re-Accredited with 'A' Grade by NAAC

College with potential for Excellence ( 2004-2021)

74<sup>th</sup> Rank in India Ranking 2021 ( NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu

**April 2021**



**Ms. A. SahayaRoselineDivya, M.Sc., B.Ed., M.Phil.,(Ph.D.,)**

Assitant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai-625018.

### **CERTIFICATE**

This is to certify that this project entitled “**A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**” submitted by the following students for the award of the degree of Bachelor of science in Mathematics is a bonafide record of work carried by them under my guidance and supervision.

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

**Place : Madurai**

**Date: 29 - 03 - 2024**

*A. Sahaya Roseline Divya*  
SIGNATURE OF SUPERVISOR

*L. Sibi Marian*  
30-3-24.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON INTUITIONISTIC FUZZY ALGEBRA**

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**

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

Under the Guidance of

Ms. A. SAHAYA ROSELINE DIVYA, M.Sc., B.Ed., M.Phil.,(Ph.d.),.

Assitant Professor

Department of Mathematics



Fatima College (Autonomous)

Re-Accredited with 'A' Grade by NAAC

College with potential for Excellence ( 2004-2021)

74<sup>th</sup> Rank in India Ranking 2021 ( NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu

**April 2021**



**Ms. A. SahayaRoselineDivya, M.Sc., B.Ed., M.Phil.,(Ph.D.,)**

Assitant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai-625018.

### **CERTIFICATE**

This is to certify that this project entitled “**A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**” submitted by the following students for the award of the degree of Bachelor of science in Mathematics is a bonafide record of work carried by them under my guidance and supervision.

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

**Place : Madurai**

**Date: 29 - 03 - 2024**

*A. Sahaya Roseline Divya*  
SIGNATURE OF SUPERVISOR

*L. Sibi Marian*  
30-3-24.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON INTUITIONISTIC FUZZY ALGEBRA**

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**

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

Under the Guidance of

Ms. A. SAHAYA ROSELINE DIVYA, M.Sc., B.Ed., M.Phil.,(Ph.d.),.

Assitant Professor

Department of Mathematics



Fatima College (Autonomous)

Re-Accredited with 'A' Grade by NAAC

College with potential for Excellence ( 2004-2021)

74<sup>th</sup> Rank in India Ranking 2021 ( NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu

**April 2021**



**Ms. A. SahayaRoselineDivya, M.Sc., B.Ed., M.Phil.,(Ph.D.,)**

Assitant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai-625018.

### **CERTIFICATE**

This is to certify that this project entitled “**A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**” submitted by the following students for the award of the degree of Bachelor of science in Mathematics is a bonafide record of work carried by them under my guidance and supervision.

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

**Place : Madurai**

**Date: 29 - 03 - 2024**

*A. Sahaya Roseline Divya*  
SIGNATURE OF SUPERVISOR

*L. Sibi Marian*  
30-3-24.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**

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**

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

Under the Guidance of

Ms. A. SAHAYA ROSELINE DIVYA, M.Sc., B.Ed., M.Phil.,(Ph.d.),.

Assitant Professor

Department of Mathematics



Fatima College (Autonomous)

Re-Accredited with 'A' Grade by NAAC

College with potential for Excellence ( 2004-2021)

74<sup>th</sup> Rank in India Ranking 2021 ( NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu

**April 2021**



**Ms. A. SahayaRoselineDivya, M.Sc., B.Ed., M.Phil.,(Ph.D.,)**

Assitant Professor,

Department of Mathematics,

Fatima College (Autonomous),

Madurai-625018.

### **CERTIFICATE**

This is to certify that this project entitled “**A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**” submitted by the following students for the award of the degree of Bachelor of science in Mathematics is a bonafide record of work carried by them under my guidance and supervision.

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

**Place : Madurai**

**Date: 29 - 03 - 2024**

*A. Sahaya Roseline Divya*  
SIGNATURE OF SUPERVISOR

*J. L. L. L. L.*  
30-3-21.  
SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**

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**

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

Under the Guidance of

Ms. A. SAHAYA ROSELINE DIVYA, M.Sc., B.Ed., M.Phil.,(Ph.d.),.

Assitant Professor

Department of Mathematics



Fatima College (Autonomous)

Re-Accredited with 'A' Grade by NAAC

College with potential for Excellence ( 2004-2021)

74<sup>th</sup> Rank in India Ranking 2021 ( NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu

**April 2021**







# **A STUDY ON INTUTIONISTIC FUZZY ALGEBRA**

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**

2018M57	M.Selvisaroni
2018M58	P.Shanthi
2018M59	A.Shiny
2018M60	L.Sibi Marian
2018M61	G.Sivashankari
2018M62	R.Sivasangari
2018M63	R.Sneka
2018M64	S.Sureka

Under the Guidance of

Ms. A. SAHAYA ROSELINE DIVYA, M.Sc., B.Ed., M.Phil.,(Ph.d.),.

Assitant Professor

Department of Mathematics



Fatima College (Autonomous)

Re-Accredited with 'A' Grade by NAAC

College with potential for Excellence ( 2004-2021)

74<sup>th</sup> Rank in India Ranking 2021 ( NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu

**April 2021**







# **A STUDY ON FERMAT 'S THEOREM AND ITS APPLICATIONS**

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**

2018M65	E.Thilophy
2018M66	K.Varuni
2018M67	P.Vel Selva Nevetha
2018M68	X.Vincy Merlin
2018M69	M.Anufrancia
2018M70	J.Poula Mary
2018M71	M.Punitha
2018M72	M.Sylvia

Under the Guidance of

Dr.Mrs.K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Dr.Mrs. K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

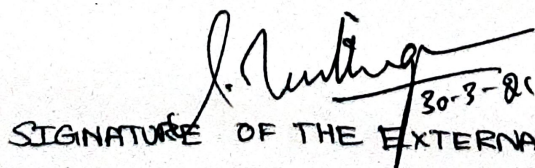
E.Thilophy	2018M65
K.Varuni	2018M66
P.Vel Selva Nevetha	2018M67
X.Vincy Merlin	2018M68
M.Anufrancia	2018M69
J.Poula Mary	2018M70
M.Punitha	2018M71
M.Sylvia	2018M72

PLACE: Madurai

DATE: 30:3:2021



SIGNATURE OF SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FERMAT 'S THEOREM AND ITS APPLICATIONS**

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**

2018M65	E.Thilophy
2018M66	K.Varuni
2018M67	P.Vel Selva Nevetha
2018M68	X.Vincy Merlin
2018M69	M.Anufrancia
2018M70	J.Poula Mary
2018M71	M.Punitha
2018M72	M.Sylvia

Under the Guidance of

Dr.Mrs.K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Dr.Mrs. K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

E.Thilophy	2018M65
K.Varuni	2018M66
P.Vel Selva Nevetha	2018M67
X.Vincy Merlin	2018M68
M.Anufrancia	2018M69
J.Poula Mary	2018M70
M.Punitha	2018M71
M.Sylvia	2018M72

PLACE: Madurai

DATE: 30:3:2021



SIGNATURE OF SUPERVISOR



SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FERMAT 'S THEOREM AND ITS APPLICATIONS**

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**

2018M65	E.Thilophy
2018M66	K.Varuni
2018M67	P.Vel Selva Nevetha
2018M68	X.Vincy Merlin
2018M69	M.Anufrancia
2018M70	J.Poula Mary
2018M71	M.Punitha
2018M72	M.Sylvia

Under the Guidance of

Dr.Mrs.K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Dr.Mrs. K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

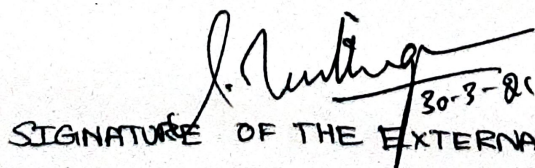
E.Thilophy	2018M65
K.Varuni	2018M66
P.Vel Selva Nevetha	2018M67
X.Vincy Merlin	2018M68
M.Anufrancia	2018M69
J.Poula Mary	2018M70
M.Punitha	2018M71
M.Sylvia	2018M72

PLACE: Madurai

DATE: 30:3:2021



SIGNATURE OF SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FERMAT 'S THEOREM AND ITS APPLICATIONS**

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**

2018M65	E.Thilophy
2018M66	K.Varuni
2018M67	P.Vel Selva Nevetha
2018M68	X.Vincy Merlin
2018M69	M.Anufrancia
2018M70	J.Poula Mary
2018M71	M.Punitha
2018M72	M.Sylvia

Under the Guidance of

Dr.Mrs.K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Dr.Mrs. K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

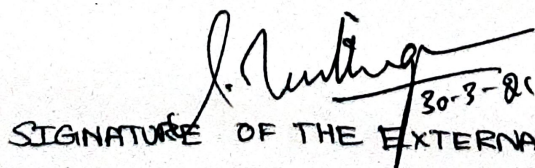
E.Thilophy	2018M65
K.Varuni	2018M66
P.Vel Selva Nevetha	2018M67
X.Vincy Merlin	2018M68
M.Anufrancia	2018M69
J.Poula Mary	2018M70
M.Punitha	2018M71
M.Sylvia	2018M72

PLACE: Madurai

DATE: 30:3:2021



SIGNATURE OF SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FERMAT 'S THEOREM AND ITS APPLICATIONS**

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**

2018M65	E.Thilophy
2018M66	K.Varuni
2018M67	P.Vel Selva Nevetha
2018M68	X.Vincy Merlin
2018M69	M.Anufrancia
2018M70	J.Poula Mary
2018M71	M.Punitha
2018M72	M.Sylvia

Under the Guidance of

Dr.Mrs.K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Dr.Mrs. K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

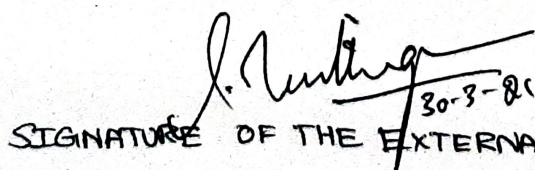
E.Thilophy	2018M65
K.Varuni	2018M66
P.Vel Selva Nevetha	2018M67
X.Vincy Merlin	2018M68
M.Anufrancia	2018M69
J.Poula Mary	2018M70
M.Punitha	2018M71
M.Sylvia	2018M72

PLACE: Madurai

DATE: 30:3:2021



SIGNATURE OF SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FERMAT 'S THEOREM AND ITS APPLICATIONS**

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**

2018M65	E.Thilophy
2018M66	K.Varuni
2018M67	P.Vel Selva Nevetha
2018M68	X.Vincy Merlin
2018M69	M.Anufrancia
2018M70	J.Poula Mary
2018M71	M.Punitha
2018M72	M.Sylvia

Under the Guidance of

Dr.Mrs.K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Dr.Mrs. K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

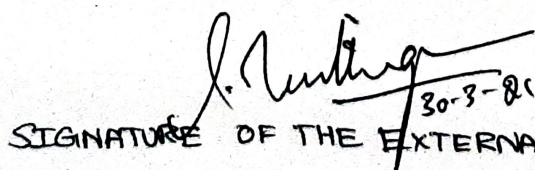
E.Thilophy	2018M65
K.Varuni	2018M66
P.Vel Selva Nevetha	2018M67
X.Vincy Merlin	2018M68
M.Anufrancia	2018M69
J.Poula Mary	2018M70
M.Punitha	2018M71
M.Sylvia	2018M72

PLACE: Madurai

DATE: 30:3:2021



SIGNATURE OF SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER



# **A STUDY ON FERMAT 'S THEOREM AND ITS APPLICATIONS**

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**

2018M65	E.Thilophy
2018M66	K.Varuni
2018M67	P.Vel Selva Nevetha
2018M68	X.Vincy Merlin
2018M69	M.Anufrancia
2018M70	J.Poula Mary
2018M71	M.Punitha
2018M72	M.Sylvia

Under the Guidance of

Dr.Mrs.K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Dr.Mrs. K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

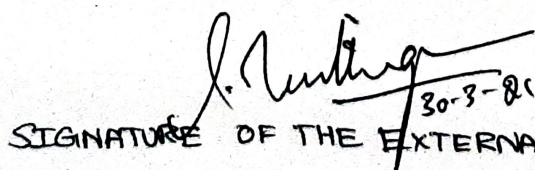
E.Thilophy	2018M65
K.Varuni	2018M66
P.Vel Selva Nevetha	2018M67
X.Vincy Merlin	2018M68
M.Anufrancia	2018M69
J.Poula Mary	2018M70
M.Punitha	2018M71
M.Sylvia	2018M72

PLACE: Madurai

DATE: 30:3:2021



SIGNATURE OF SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER



**A STUDY ON FERMAT 'S THEOREM AND ITS  
APPLICATIONS**

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**

2018M65	E.Thilophy
2018M66	K.Varuni
2018M67	P.Vel Selva Nevetha
2018M68	X.Vincy Merlin
2018M69	M.Anufrancia
2018M70	J.Poula Mary
2018M71	M.Punitha
2018M72	M.Sylvia

Under the Guidance of

Dr.Mrs.K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant professor,

Department Of Mathematics



Fatima College [Autonomous]

Re-Accredited with 'A' Grade by NACC (3<sup>rd</sup> Cycle)

College with potential for excellence (2004-2021)

74<sup>th</sup> Ranking in India Ranking 2020 (NIRF) by MHRD

Mary Land, Madurai-625018, Tamil Nadu.

**MARCH-2021**



Dr.Mrs. K.AMUTHA M.Sc., M.Phil., B.Ed.,Ph.D

Assistant Professor,

Department Of Mathematics,

Fatima College [Autonomous],

Madurai-625018.

### CERTIFICATE

This is to certify that this project entitled “**A STUDY ON FERMAT’S THEOREM AND ITS APPLICATIONS**” submitted by the following students for the award of the degree of Bachelor’s Of Science in Mathematics is a bonafide record of work carried out by them under my Guidance and supervision.

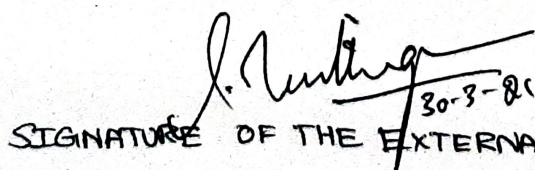
E.Thilophy	2018M65
K.Varuni	2018M66
P.Vel Selva Nevetha	2018M67
X.Vincy Merlin	2018M68
M.Anufrancia	2018M69
J.Poula Mary	2018M70
M.Punitha	2018M71
M.Sylvia	2018M72

PLACE: Madurai

DATE: 30:3:2021



SIGNATURE OF SUPERVISOR



30-3-21.

SIGNATURE OF THE EXTERNAL EXAMINER