
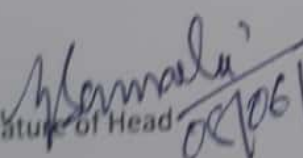


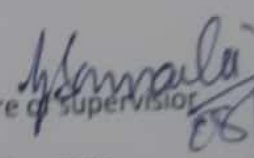
CERTIFICATE

This is certify that the project work entitled "Location of Eigen Values and its Application" Submitted by Tapas Behera (Regd No-16583/21) in Partial Fullfilment of the requirements for the award of the degree of the **MASTER OF SCIENCE** in Mathematics to the **Fakir Mohan University , Balasore**, is an authentic work and was carried out by him under my direct supervision and guidance .

To the best of my knowledge ,the matter embodied in the project has not been submitted to any other university/institute for the award of any other degrees .


Signature of examiner

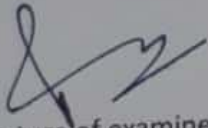

Signature of Head
Dr. G.C Samanta
Associate professor
Department of Mathematics


Signature of supervisor
Dr. G.C Samanta
Associate Professor
Department of Mathematics

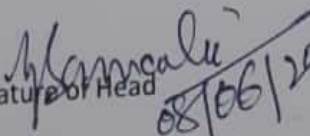
CERTIFICATE

This is certify that the project work entitled "Location of Eigen Values and its Application" Submitted by **Deeptimayee Acharya** (Regd No-16581/21) in Partial Fullfilment of the requirements for the award of the degree of the **MASTER OF SCIENCE** in Mathematics to the **Fakir Mohan University , Balasore**, is an authentic work and was carried out by her under my direct supervision and guidance .

To the best of my knowledge ,the matter embodied in the project has not been submitted to any other university/institute for the award of any other degrees .



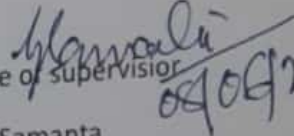
Signature of examiner


Signature of Head

Dr. G.C Samanta

Associate professor

Department of Mathematics


Signature of supervisor

Dr. G.C Samanta

Associate Professor

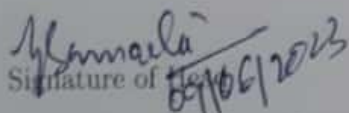
Department of Mathematics



CERTIFICATE

This is to certify that the project report entitled " STUDY ON A NEW GENERALIZATION OF BANACH CONTRACTION PRINCIPLE AND IT'S APPLICATION ", submitted by JYOTI PRAKASH BISWAL (Regd.No - 16585/21) in partial fulfilment of the requirements for the award of the degree of Master of Science in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him under my direct supervision and guidance.

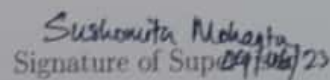
To the best of my knowledge, the matter embodied in the project has not been submitted to any other university for the award of any other degree.


Signature of

Dr. Gauranga Charan Samanta

Associate Professor

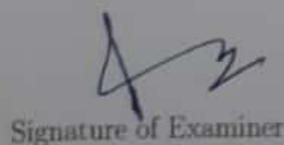
Department of Mathematics


Signature of Sup

Dr. Sushomita Mohanta

Assistant Professor

Department of Mathematics

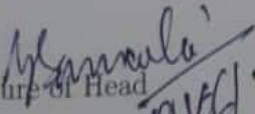

Signature of Examiner

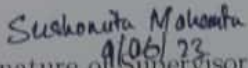


CERTIFICATE

This is to certify that the project report entitled "SELF ADJOINT LINEAR OPERATOR IN A HILBERT SPACE", submitted by ITISHREE BISWAL(16584/21) in partial fulfilment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him/her under my direct supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/ institute for the award of any other degree.


Signature of Head
Dr. Gauranga Charan Samanta
Associate Professor
Department of Mathematics


Signature of Supervisor
Dr. Sushomita Mohanta
Assistant Professor
Department of Mathematics

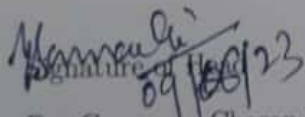

Signature of Examiner



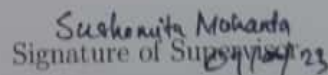
CERTIFICATE

This is to certify that the project report entitled "SELF ADJOINT LINEAR OPERATOR IN A HILBERT SPACE", submitted by RASHMITA SAHOO(16596/21) in partial fulfilment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him/her under my direct supervision and guidance.

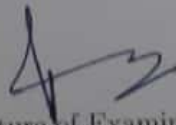
To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/ institute for the award of any other degree.


Signature of Supervisor

Dr. Gauranga Charan Samanta
Associate Professor
Department of Mathematics


Signature of Supervisor

Dr. Sushomita Mohanta
Assistant Professor
Department of Mathematics



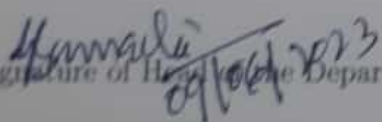
Signature of Examiner



CERTIFICATE

This is to certify that the project work entitled "ELLIPTIC CURVES & IT'S APPLICATION" submitted by SANDIP KUMAR NAYAK(11801FM214012) in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him under my direct supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other institute for the award of any other degree.

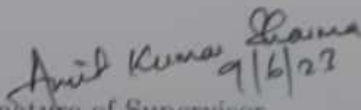

Signature of Head of the Department

Dr. Gauranga Charan Samanta

Associate Professor

Department of Mathematics

Fakir Mohan University, Balasore


Signature of Supervisor

Dr. Amit Kumar Sharma

Assistant Professor

Department of Mathematics

Fakir Mohan University, Balasore

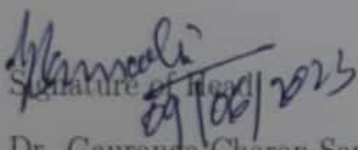

Signature of Examiner



CERTIFICATE

This is to certify that the project report entitled "STUDY ON A NEW GENERALIZATION OF BANACH CONTRACTION PRINCIPLE AND ITS APPLICATION", submitted by SHUBHASHREE SWAYAMSUDHA SAMAL (Regd.No - 16599/21) in partial fulfilment of the requirements for the award of the degree of Master of Science in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him under my direct supervision and guidance.

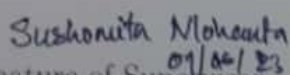
To the best of my knowledge, the matter embodied in the project has not been submitted to any other university for the award of any other degree.


Signature of
09/06/23

Dr. Gauranga Charan Samanta

Associate Professor

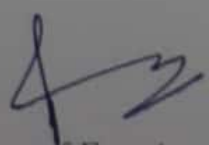
Department of Mathematics


Signature of Supervisor
09/06/23

Dr. Sushomita Mohanta

Assistant Professor

Department of Mathematics

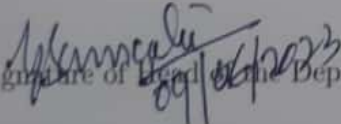

Signature of Examiner



CERTIFICATE

This is to certify that the project work entitled "ELLIPTIC CURVES & IT'S APPLICATION" submitted by PRAVEEN KUMAR MOHANTY (11801FM214010) in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him under my direct supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other institute for the award of any other degree.

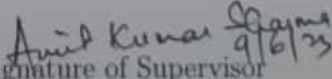

Signature of Head of the Department

Dr. Gauranga Charan Samanta

Associate Professor

Department of Mathematics

Fakir Mohan University, Balasore


Signature of Supervisor

Dr. Amit Kumar Sharma

Assistant Professor

Department of Mathematics

Fakir Mohan University, Balasore

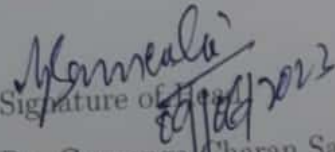

Signature of Examiner

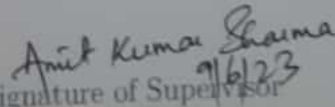


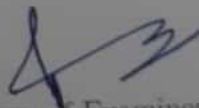
CERTIFICATE

This is to certify that the project report entitled “**DIOPHANTINE EQUATION & IT'S APPLICATIONS**”, submitted by **SUCHETA SAHOO (11801FM214017)** in partial fulfilment of the requirements for the award of the degree of **MASTER OF SCIENCE in Mathematics** to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my direct supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other institute for the award of any other degree.


Signature of
Dr. Gauranga Charan Samanta
Associate Professor
Department of Mathematics

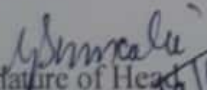

Signature of Supervisor
Dr. Amit Kumar Sharma
Assistant Professor
Department of Mathematics


Signature of Examiner

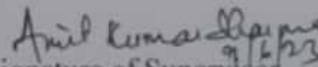
CERTIFICATE

This is to certify that the project work entitled "UMBRAL CALCULUS" submitted by **Elina Sethy** (Regd.no.16602/21) in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my direct supervision and guidance.

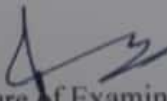
To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/institute for the award of any other degree.


Signature of Head
9/6/23

Dr. Gauranga Charan Samanta
Associate Professor
Department of Mathematics


Signature of Supervisor
9/6/23

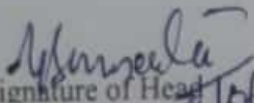
Dr. Amit Kumar Sharma
Assistant Professor
Department of Mathematics


Signature of Examiner

CERTIFICATE

This is to certify that the project work entitled "Digital Signature Scheme" submitted by SWASTI SWAGATIKA PANDA (Regd. No. - 16593/21) in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my direct supervision and guidance.

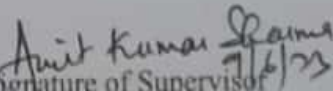
To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/institute for the award of any other degree.


Signature of Head
09/06/23

Dr. Gauranga Charan Samanta

Associate Professor

Department of Mathematics


Signature of Supervisor

Dr. Amit Kumar Sharma

Assistant Professor

Department of Mathematics


Signature of Examiner

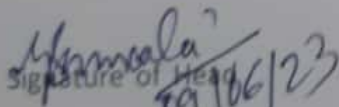
Date:



CERTIFICATE

This is to certify that the project report entitled " **STUDY ON A CO-EFFICIENTS BOUNDS ON A CERTAIN CLASS OF MULTIVALENT ANALYTIC FUNCTION** ", submitted by **JESELINE TOPPO** (Regd.No - 16604/21) in partial fulfilment of the requirements for the award of the degree of master of science in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him under my direct supervision and guidance.

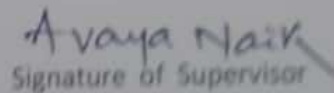
To the best of my knowledge, the matter embodied in the project has not been submitted to any other university for the award of any other degree.


Signature of Head

Dr. Gauranga Charan Samanta

Associate Professor


Department of Mathematics


Signature of Supervisor

Dr. Avaya Naik

Assistant Professor

Department of Mathematics

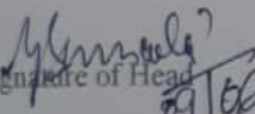

Signature of Examiner

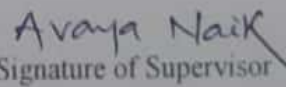


CERTIFICATE

This is to certify that the project report entitled "STUDY ON CO-EFFICIENT PROBLEM FOR A CLASS OF UNIVALENT FUNCTION", submitted by JYOTI REKHA SOREN (11801FM214023) in partial fulfilment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my direct supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other institute for the award of any other degree.


Signature of Head
29/06/23
Dr. Gauranga Charan Samanta
Associate Professor
Department of Mathematics


Signature of Supervisor
Dr. Avaya Naik
Assistant Professor
Department of Mathematics

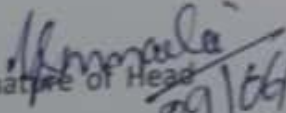

Signature of Examiner

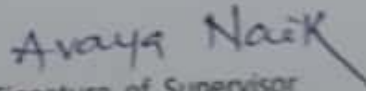


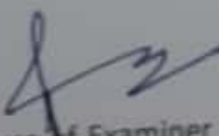
CERTIFICATE

This is to certify that the project report entitled "**STUDY ON CO-EFFICIENT PROBLEMS FOR A CLASS OF UNIVALENT FUNCTIONS**", submitted by **SUBODHA KUMAR PRADHAN (16594/21)** in partial fulfillment of the requirements for the award of the degree of **MASTER OF SCIENCE** in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him/her under my direct supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/ institute for the award of any other degree.


Signature of Head
29/06/23
Dr. Gauranga Chaitan Samanta
Associate Professor
Department of Mathematics


Signature of Supervisor
Dr. Avaya Naik
Assistant Professor
Department of Mathematics

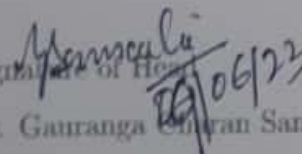

Signature of Examiner




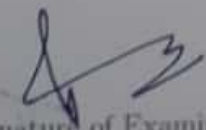
CERTIFICATE

This is to certify that the project report entitled "DIOPHANTINE EQUATION & IT'S APPLICATIONS", submitted by JYOTIREKHA MURMU (11801FM214011) in partial fulfilment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my direct supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other institute for the award of any other degree.


Signature of Head
Dr. Gauranga Charan Samanta
Associate Professor
Department of Mathematics

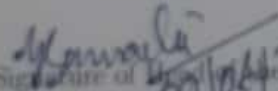

Signature of Supervisor
Dr. Amit Kumar Sharma
Assistant Professor
Department of Mathematics


Signature of Examiner



CERTIFICATE

This is to certify that the project work entitled "ELLIPTIC CURVES & IT'S APPLICATION" submitted by SURESH KUMAR SETHI(11801FM214021) in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him under my direct supervision and guidance. To the best of my knowledge, the matter embodied in the project has not been submitted to any other institute for the award of any other degree.

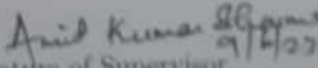

Signature of _____ Department
29/06/23

Dr. Gauranga Charan Samanta

Associate Professor

Department of Mathematics

Fakir Mohan University, Balasore



Signature of Supervisor
29/6/23

Dr. Amit Kumar Sharma

Assistant Professor

Department of Mathematics

Fakir Mohan University, Balasore

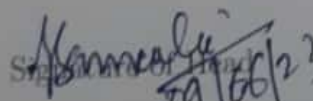

Signature of Examiner

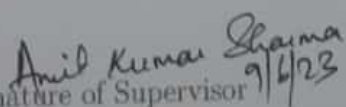


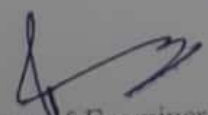
CERTIFICATE

This is to certify that the project report entitled “**DIOPHANTINE EQUATION & IT'S APPLICATIONS**”, submitted by **SARITA DAS** (11801FM214006) in partial fulfilment of the requirements for the award of the degree of **MASTER OF SCIENCE** in **Mathematics** to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my direct supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other institute for the award of any other degree.


Signature of Supervisor
Dr. Gauranga Charan Samanta
Associate Professor
Department of Mathematics

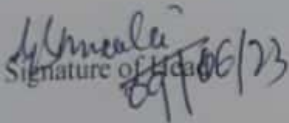

Signature of Supervisor
Dr. Amit Kumar Sharma
Assistant Professor
Department of Mathematics


Signature of Examiner

CERTIFICATE

This is to certify that the project work entitled "Digital Signature Scheme" submitted by MONALI DASH (Regd. No. - 16588/21) in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my direct supervision and guidance.

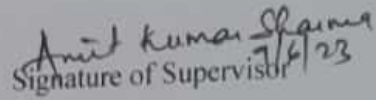
To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/institute for the award of any other degree.


Signature of Head

Dr. Gauranga Charan Samanta

Associate Professor

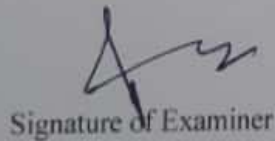
Department of Mathematics


Signature of Supervisor

Dr. Amit Kumar Sharma

Assistant Professor

Department of Mathematics


Signature of Examiner

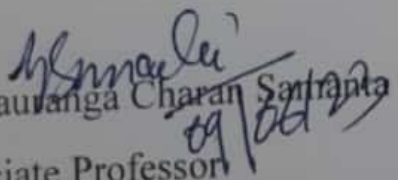
Date:

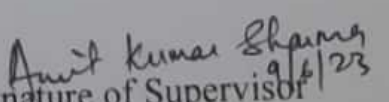
CERTIFICATE

This is to certify that the project work entitled "UMBRAL CALCULUS" submitted by **Madhusmita Sahu** (Regd.no.16598/21) in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my direct supervision and guidance.

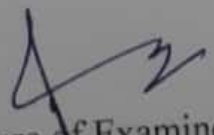
To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/institute for the award of any other degree.

Signature of Head


Dr. Gouranga Charan Sanhanta
Associate Professor
Department of Mathematics


Signature of Supervisor

Dr. Amit Kumar Sharma
Assistant Professor
Department of Mathematics

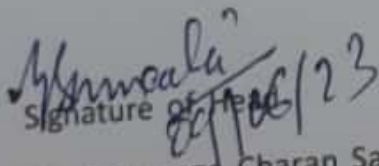

Signature of Examiner



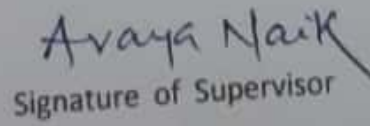
CERTIFICATE

This is to certify that the project report entitled "STUDY ON CO-EFFICIENTS BOUNDS ON A CERTAIN CLASS OF MULTIVALENT ANALYTIC FUNCTIONS" submitted by SOUMITRA DAS (16587/21) in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by him/her under my direct supervision and guidance.

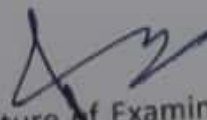
To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/ institute for the award of any other degree.


Signature of Head

Dr. Gauranga Charan Samanta
Associate Professor
Department of Mathematics


Signature of Supervisor

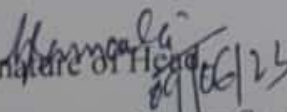
Dr. Avaya Naik
Assistant Professor
Department of Mathematics



Signature of Examiner

CERTIFICATE

This is the certify that the project work entitled "solving system of nonlinear equations by numerical method" submitted by SNIGDHARANI SAMAL (Regd. No. – 16600/21) in partial fulfilment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/institute for the award of any other degree.


Signature of Head
Dr. Gaurang Charan Samanta
Associate Professor
Department of Mathematics


Signature of Supervisor
Dr. Sanjay Kumar Parhi
Associate Professor
Department of Mathematics

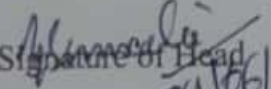

Signature of Examiner


Date:

CERTIFICATE

This is the certify that the project work entitled "solving system of nonlinear equations by numerical method" submitted by JYOTIRMAYEE ROUT (Regd. No. – 16595/21) in partial fulfilment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/institute for the award of any other degree.


Signature of Head
Dr. Gaurang Charan Samanta
Associate Professor
Department of Mathematics


Signature of Supervisor
Dr. Sanjaya Kumar Parhi
Associate Professor
Department of Mathematics

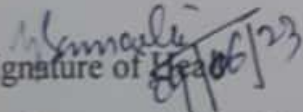

Signature of Examiner


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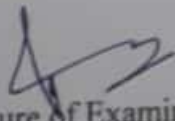
CERTIFICATE

This is the certify that the project work entitled "solving system of nonlinear equations by numerical method" submitted by DEEPTIRANI MARNDI (Regd. No. – 16589/21) in partial fulfilment of the requirements for the award of the degree of MASTER OF SCIENCE in Mathematics to the Fakir Mohan University, Balasore, is an authentic work and was carried out by her under my supervision and guidance.

To the best of my knowledge, the matter embodied in the project has not been submitted to any other university/institute for the award of any other degree.


Signature of ~~Dr. Gaurang Charan Samanta~~
Dr. Gaurang Charan Samanta
Associate Professor
Department of Mathematics


Signature of Supervisor
Dr. Sanjaya Kumar Parhi
Associate Professor
Department of Mathematics


Signature of Examiner

Date: