KUMBAKONAM - 612 001

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**RESEARCH PROJECT DETAILS** 



**\$** 0435 - 2401391

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principal@gcwk.ac.in

DEPARTMENT OF MATHS- 2018-2019				
SL.No	ROLL NUMBER	NAME	DETAILS OF ACTIVITY	
1	P17MA001	E. ABIRAMI	A STUDY ON SOFT SEMI SEPARATION AXIOMS AND CONNECTEDNESS	
2	P17MA002	S. ALAMELU	A STUDY ON TOPOLOGICAL GROUPS	
3	P17MA003	A. BALASUNDARI	A STUDY ON LINEAR OPERATORS AND ORTHONORMAL SYSTEM.	
4	P17MA004	B. BHUVANESHWARI	A STUDY ON DIFFERENT TYPES PAIRWISE B- CONTINUOUS FUNCTIONS IN BITOPOLOGICAL SPACES	
5	P17MA005	M. DEEPIKA	A STUDY ON MINIMAL GP –SEPARATION AXIOMS AND MINIMAL GP-CONTINUOUS MAPS	
6	P17MA006	S. DEVI	A STUDY ON SOFT INTERSECTION GROUPS	
7	P17MA007	G.DHIVYA	A STUDY ON GALOIS THEORY OVER THE RATIONALS	
8	P17MA008	M.DHIVYA	A STUDY ON PRE ROW CONNECTEDNESS AND PRE ROW COMPACTNESS IN A TOPOLOGICAL SPACES	
9	P17MA009	B.ESWARI	A STUDY ON MULTI FUZZY GROUP AND ITS LEVEL SUBGROUPS	
10	P17MA010	J.GUNASUNDARI	A STUDY ON METHODS OF GAME THEORY	
11	P17MA011	S. KALAIYARASI	A STUDY ON MORE PENROSE INVERSE AND DRASING PSEUDO INVERSE OF A MATRIX	
12	P17MA012	Y. KANIMOZHI	A STUDY ON PARTIALLY ORDERED R- SEMI GROUPS AND PARTIAL ACTION OF INVERSE SEMI GROUPS	
13	P17MA013	K. KEERTHANA	A STUDY ON ANTI HAUSDORFF SPACE AND IDEAL HAUSDORFF SPACE	
14	P17MA014	M.L. MEENATCHI	A STUDY ON GELFAND THEORY	
15	P17MA015	S. MEERA	A STUDY ON ALPHA FUZZY AND ALPHA ANTI FUZZY SUBGROUPS	
16	P17MA016	K. NITHYA	A STUDY ON FUZZY SIMPLY * CONTINUOUS FUNCTION	
17	P17MA017	S. PRIYANKA	A STUDY ON SINGLE VARIABLE AND MULTI VARIATE FORMAL POWER SERIES	

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std. 19	63 63 0435	- 2401391	principal@gcwk.ac.in
18	P17MA018	M. RADHA	A STUDY ON SINGLE VARIABLE AND MULTI VARIATE FORMAL POWER SERIES
19	P17MA019	V. RAJESHWARI	A STUDY ON B-CONNECTEDNESS AND B- DISCONNECTEDNESS
20	P17MA020	M. RAMYA	A STUDY ON CHARACTERIZATION OF LOW SEPARATION AXIOMS IN VIA ALPHA-OPEN SETS AND ALPHA' – CLOSURE OPERATOR
21	P17MA021	M. SANGEETHA	A STUDY ON MINIMAL TOQUE
22	P17MA022	M. SANTHIYA	A STUDY ON COHOMOLOGY OF FIRST AND PROFINITE GROUPS
23	P17MA023	M. SANTHIYA	A STUDY ON FUZZY ALMOST AND PAIRWISE FUZZY ALMOST RESOLVABLE SPACES
24	P17MA024	S. SARANYA	A STUDY ON PELL'S EQUATION AND ITS APPLICATIONS IN NUMBER THEORY
25	P17MA025	B. SHALINI	A STUDY ON PRE-GAMMA -OPEN SETS AND SEPARATION AXIOMS
26	P17MA026	S. SOWNDARIYA	A STUDY ON FUZZY SIGMA - BAIRE SPACES
27	P17MA027	A. SURYA	A STUDY ON FREE GROUPS AND ITS PROPERTIES
28	P17MA028	K. SURYA	A STUDY ON (Q,L)-FUZZY SUBRING AND (Q,L)- FUZZY SUBSEMIRING
29	P17MA029	G. VIMALA	A STUDY ON SEPARATION AXIOMS FOR SUPRA TOPOLOGICAL SPACES
30	P17MA030	R. VISHNUPRIYAI	A STUDY ON SCOTT TOPOLOGY AND ITS RELATION TO THE ALEXANDROFF TOPOLOGY
31	P17MA031	K. VISHNUPRIYA	A STUDY ON TENSOR PRODUCT OF MODULES
32	P17MA032	R. VISHNUPRIYAI	A STUDY ON BC-SEPARATION AXIOMS IN TOPOLOGICAL SPACES



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**R. YUVARANI** 

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P17MA033

P17MA034

CIPAL PRI Government College for Women(Autonomous) KUMBAKONAM.

A STUDY ON COMPLETION OF A METRIC SPACE

A STUDY ON SOFT INTERSECTION IDEALS OF LA-

**SEMI GROUP** 

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**RESEARCH PROJECT DETAILS** 



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DEPARTMENT OF MATHS- 2019-2020			
SL.No	ROLL NUMBER	NAME	DETAILS OF ACTIVITY
1	P18MA001	S.AJITHA	A STUDY ON CYCLIC CODES AND GENERATOR POLYNOMIAL OF CYCLIC CODES
2	P18MA002	R.ARTHI	A STUDY ON MINIMUM HAMMING DISTANCE AND HAMMING CODE
3	P18MA003	S. ARUNA	A STUDY ON SUPER VERTEX GRACEFUL LABELING OF GRAPHS
4	P18MA004	S. BOWYA	A STUDY ON WEAKLY STAR g CLOSED SETS AND SEMI WEAKLY g STAR CLOSED SETS IN TOPOLOGICAL SPACES
5	P18MA005	L. DEEPIKA	A STUDY ON COMPLEMENT AND BI - COMPLEMENT REDUCIBLE GRAPHS (OR) COGRAPH AND BI - COGRAPH
6	P18MA006	G. DIVYA	A STUDY ON SOME NEW SETS IN IDEAL TOPOLOGICAL SPACES
7	P18MA007	S. ELAMATHY	A STUDY ON APPLICATION OF SOFT SET THEORY USING DECISION MAKING PROBLEM
8	P18MA008	R. GEETHA	A STUDY ON SOFT GENERALIZED CLOSED SETS IN SOFT TOPOLOGICAL SPACES
9	P18MA009	M. HARIPRIYA	A STUDY ON SOLUTION OF ORDINARY DIFFERENTIAL SYSTEM WITH FIRST ORDER DIFFERENTIAL EQUATION AND LINEAR TRANSFORMATION IN SYMMETRY GROUP
10	P18MA010	K. JAYAPRIYA	A STUDY ON LEFT BI - QUASI IDEAL OF - SEMIRINGS
11	P18MA011	R. JEEVA	A STUDY ON REGULAR GENERALIZED OPENSETS IN TOPOLOGICAL SPACES
12	P18MA012	P. KALAISELVI	A STUDY ON SOFT INTERSECTION NEAR RINGS AND SOFT INTERSECTION SET IN GAMMA NEAR RINGS
13	P18MA013	R. KAVIYA	A STUDY ON k - NEIGHBORHOOD PRIME LABELING OF GRAPHS
14	P18MA014	K. KEERTHIKA	A STUDY ON SOFT SEPARATION AXIOMS AND SOFT SEMI SEPARATION AXIOMS IN SOFT TOPOLOGICAL SPACES
15	P18MA015	J. KRISHNAVENI	A STUDY ON FUZZY SOFT K - HAUSDORFF SPACES
16	P18MA016	C. LOGESWARI	A STUDY ON RADIO MEAN SQUARE LABELING OF SOME GRAPHS

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17	P18MA017	M. MITHURA	A STUDY ON K - SUPER HARMONIC MEAN LABELING OF GRAPHS
18	P18MA018	M. MUTHULAKSHMI	A STUDY ON F - GEOMETRIC AND SUPER GEOMETRIC MEAN LABELING OF GRAPHS
19	P18MA019	B. NANTHINI	A STUDY ON GENERALIZED b STAR CLOSED SETS AND SEMI GENERALIZED STAR - b CLOSED SETS IN TOPOLOGICAL SPACES
20	P18MA020	L. NIVETHA	A STUDY ON F - ROOT SQUARE MEAN LABELING OF GRAPHS OBTAINED FROM PATHS
21	P18MA021	S. PAVITHRA	A STUDY ON * -GENERALIZEDSEMI COMPACTNESS AND * - GENERALIZED SEMI CONNECTEDNESS IN TOPOLOGICAL SPACES
22	P18MA022	G. PRATHIPA	A STUDY ON SUPER LEHMER - 3 MEAN LABELING
23	P18MA023	C. PRIYA	A STUDY ON VARIOUS LABELING ON BULL GRAPH AND ITS APPLICATIONS
24	P18MA024	S. PRIYADHARSHINI	A STUDY ON - COLSED SETS IN TOPOLOGICAL SAPACES
25	P18MA025	A. PRIYANGA	A STUDY ON SOFT MATRIX AND FUZZY SOFT MATRIX THEORY AND ITS DECISION MAKING
26	P18MA026	R. REVATHI	A STUDY ON g*s - CONTINUOUS FUNCTION AND g*s - HOMEOMORPHISM IN TOPOLOGICAL SPACES
27	P18MA027	S. REVATHI	A STUDY ON MATHEMATICAL MODELING ON CANCER TREATMENT
28	P18MA028	P. SANKARI	A STUDY ON GENERALIZED b - COLSED SETS IN TOPOLOGICAL SPACES
29	P18MA029	R. SATHYA	A STUDY ON SECOND ORDER LINEAR EQUATION AND ITS APPLICATION
30	P18MA030	S. SINDHUJA	A STUDY ON POWER MEAN LABELING OF GRAPHS
31	P18MA031	N. SIVARANJANI	A STUDY ON LINEAR CODES AND PARITY CHECK MATRIX
32	P18MA032	S. SUGANTHI	A STUDY ON Sg - CONTINUOUS FUNCTION AND sgp CONTINUOUS FUNCTION IN TOPOLOGICAL SPACES
33	P18MA033	M. UMADEVI	A STUDY ON TOPOLOGICAL VECTOR SPACES



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**RESEARCH PROJECT DETAILS** 



**6** 0435 - 2401391

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DEPARTMENT OF MATHS- 2020-2021				
SL.No	ROLL NUMBER	NAME	DETAILS OF ACTIVITY	
1	P19MA001	ABINAYA .M	A STUDY ON VARIOUS LABELING AND COLOURING OF BULL GRAPHS	
2	P19MA002	ABINAYA . N	A STUDY ON INTUITIONISTIC FUZZY GRAPH	
3	P19MA003	ANUSUYA. K	A STUDY ON SOFT MATRIX AND FUZZY SOFT MATRIX THEORY AND ITS DECISION MAKING	
4	P19MA004	DAYANA. P	A STUDY ON FRACTIONAL ARBORICITY AND MATROID METHODS	
5	P19MA005	DHIVYA. T	A STUDY ON ODD AND EVEN GRACEFUL LABELING OF A GRAPH	
6	P19MA006	DURGA. K	A STUDY ON FUZZY DOT SUB-ALGEBRAS AND FUZZY DOT IDEALS OF B-ALGEBRAS	
7	P19MA007	GAYATHRI. A	A STUDY ON PRIME LABELING OF UNION GRAPHS	
8	P19MA008	ISHWARIYA. R	A STUDY ON BITOPOLOGICAL SPACES	
9	P19MA009	KALAIMANI. K	A STUDY ON GRAPHOIDAL COVERING AND 2- GRAPHOIDAL COVERING NUMBER OF A GRAPH	
10	P19MA010	KALAIMATHI. A	A STUDY ON HARMONIOUS LABELING AND HARMONIOUS COLOURING OF GRAPHS	
11	P19MA011	KALPANA. S	A STUDY ON APPLICATION OF QUEUING THEORY APPLIED IN OUR DAY TO DAY LIFE	
12	P19MA012	KAMALI. R	A STUDY ON CYCLE CONNECTIVITY AND CONNECTIVITY ANALYSIS OF CYCLICALLY BALANCED FUZZY GRAPHS	
13	P19MA013	KANIMOZHI. E	A STUDY ON UPPER BOUNDS ON THE L(2,1)- LABELING NUMBER OF GRAPHS WITH MAXIMUM DEGREE DELTA	
14	P19MA014	KASTHURI. K	A STUDY ON SUPER MEAN LABELING OF GRAPHS	
15	P19MA015	KAVIYASRI. C	A STUDY ON ANALYTIC ODD MEAN LABELING OF GRAPHS	
16	P19MA016	KOWSALYA. A	A STUDY ON DISTANCE AND DISSIMILARITY MEASURE OF PICTURE FUZZY SET	
17	P19MA017	LAKSHMI. S	A STUDY ON PRODUCT CORDIAL LABELING AND EDGE PRODUCT CORDIAL LABELING OF GRAPHS	
18	P19MA018	LAKSHMIPRIYA. M	A STUDY ON THEORY OF MODULES AND FUZZY MODULES	
19	P19MA019	LAVANYA. R	A STUDY ON SOFT SOMEWHERE DENSE SETS ON SOFT TOPOLOGICAL SPACE	
20	P19MA020	LISHA. K	A STUDY ON TYPES OF LATTICES	

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Estd. 19	63 63 0435	- 2401391	> principal@gcwk.ac.in		
21	P19MA021	MULLAI. B	A STUDY ON REGULAR AND IRREGULAR FUZZY GRAPHS		
22	P19MA022	NITHYA. E	A STUDY ONADJOINT THEORY OF SQUARE FUZZY MATRIX		
23	P19MA023	PAVATHARANI. P. S	A STUDY ON CHAPMAN-KOLMOGOROV EQUATION IN FORWARD AND BACKWARD EQUATIONS AND ITS APPLICATION		
24	P19MA024	PRIYATHARSHINI. R	A STUDY ONFINITE DIMENSIONAL TOPOLOGICAL VECTOR SPACE AND CONNECTION TO SEMINORM		
25	P19MA025	SANTHIYA. A	A STUDY ON VERTEX MAGIC TOTAL LABELING AND ODD AND EVEN VERTEX MAGIC TOTAL LABELING OF SOME GRAPHS		
26	P19MA026	SHANTHINI. V	A STUDY ON TOTAL GRAPH AND SEMI TOTAL GRAPH		
27	P19MA027	SNEHALAKSHMI. T	A STUDY ON ROOT SQUARE MEAN LABELING OF GRAPHS		
28	P19MA028	SOWMYA. S	A STUDY ON FUZZY TOPOLOGICAL SPACE AND COMPACT FUZZY TOPOLOGICAL SPACE		
29	P19MA029	TAMILARASI. R	A STUDY ONSEPARABILITY AND COMPACTNESS IN SOFT TOPOLOGICAL SPACES		
30	P19MA030	THENMOZHI. S	A STUDY ON ISOMORPHISM ON FUZZY GRAPHS AND COMPLEMENTARY FUZZY GRAPHS		
31	P19MA031	VARSHA. S	A STUDY ON NON-COMMUTING GRAPH OF A GROUP		
32	P19MA032	VARSHA RAMAN. P	A STUDY ON FUZZY INNER PRODUCT SPACE AND FINITE FUZZY ORTHOGONAL SET		



**VENGATESWARI.S** 

P19MA033

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PRINCIPAL Government College for Women(Autonomous) KUMBAKONAM.

CONTINUOUS FUNCTIONS

A STUDY ON GENERALIZATION OF SOME FUZZY

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**RESEARCH PROJECT DETAILS** 



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DEPARTMENT OF MATHS- 2021-2022			
SL.No	ROLL NUMBER	NAME	DETAILS OF ACTIVITY
1	P20MA001	S. AARTHI	A STUDY ON SOFT MATRIX THEORYAND ITS DECISION MAKING
2	P20MA002	T.AARTHI	A STUDY ON MATRIX GAMES BASED ON GRAPH
3	P20MA003	A.ABIRAMI	A STUDY ON ANALYTIC ODD AND EVEN MEAN LABELING GRAPH
4	P20MA004	G.ANUSUYA	A STUDY ON TIMETABLING USING GRAPH COLOURING
5	P20MA005	M.ANUSUYA	A STUDY ON FUZZY GRAPH AND FUZZY BI- MAGIC LABELING ON CYCLE GRAPH AND STAR GRAPH
6	P20MA006	M.DURGA	A STUDY ON LAPLACIAN MATRIX AND LAPLACIAN EIGENVALUES OF THRESHOLD GRAPHS
7	P20MA007	M.ELAKKIYA	A STUDY ON MATCHING AND COLOURING IN FUZZY LABELING OF GRAPH
8	P20MA008	U.GOWSALYA	A STUDY ON DOMINATION IN FUZZY GRAPH
9	P20MA009	R.ISHWARYA	A STUDY ON DOMINATION THEORY IN FUZZY GRAPH
10	P20MA010	R.JANSI	A STUDY ON PRIME LABELING AND COMMON WEIGHT DECOMPOSITION OF GRAPHS
11	P20MA011	J.JAYASRI	A STUDY ON SQUARE AND CUBE DIFFERENCE LABELING OF SOME GRAPHS
12	P20MA012	V.KEERTHIKAI LAKSHMI	A STUDY ON NEW APPROACH TO SEPARABILITY AND COMPACTNESS IN SOFT TOPOLOGY
13	P20MA013	M.MOHANA	A STUDY ON SUM DISTANCE AND PRODUCT FUZZY DISTANCE TWO LABELING GRAPH
14	P20MA014	S.NIVETHA	A STUDY ON TIME TO RECRUITMENT FOR A SINGLE GRADE MANPOWER SYSTEM
15	P20MA015	S.NIVETHA	A STUDY ON CONNECTIVITY IN A FUZZY GRAPH AND ITS COMPLEMENT
16	P20MA016	A.PARANIKA	A STUDY ON SUPER CUBE ROOT CUBE MEAN LABELING OF GRAPHS
17	P20MA017	G.PRAGATHI	A STUDY ON SUPER ROOT SQUARE MEAN LABELING OF GRAPH
18	P20MA018	V.PRAGATHI	A STUDY ON LUCKY EDGE NEIGHBORHOOD LABELING OF GRAPHS
19	P20MA019	M. PRIYA	A STUDT ON SOFT PC – CONNECTED SPACE
20	P20MA020	R.RAKSHANA	A STUDY ON ALGEBRAIC STRUCTURE OF GENETIC INHERITANCE

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Latu. 17	00		
21	P20MA021	R.RANJITHA	A STUDY ON ODD AND EVEN VERTEX EQUITABLE EVEN LABELING GRAPH
22	P20MA022	S. RENUGA DEVI	A STUDY ON A REVIEW ON RECENT DEVELOPMENTS OF NEUTROSOPIC MATRIX THEORY & OPEN PROBLEMS
23	P20MA023	J.SAMEENA RASHMI	A STUDY ON APPLICATIONS OF LAPLACE AND MOHAND TRANSFORMS
24	P20MA024	R.P SANTHINI	A STUDY ON EDGE MAGIC AND PRIME EDGE MAGIC LABELING OF GRAPHS
25	P20MA025	M.SANTHIYA	A STUDY ON APPLICATION OF MATRIX AND DETERMINANTS
26	P20MA026	R.SHABNA	A STUDY ON VIRUS GRAPH AND COVID-19 PANDEMIC APPLICATION OF A GRAPH THEORY
27	P20MA027	M.SNEKA	A STUDY ON APPLICATION OF FUZZY MATRIX THEORY IN MEDICAL DIAGNOSIS
28	P20MA028	M.SOUNDHARANAYAKI	A STUDY ON K-PARTITIONED AND BALANCED K- PARTITIONED FUZZY GRAPH
29	P20MA029	N.SWETHA	A STUDY ON THEORY OF CONSUMER BEHAVIOUR
30	P20MA030	G.VARSHA	A STUDY ON TYPE-2 FUZZY SOFT TOPOLOGICAL SPACES
31	P20MA031	<b>B.VIDHYABHARATHI</b>	A STUDY ON LABELING ON BULL GRAPH
32	P20MA032	R.VIJAYAVALLI	A STUDY ON MATHEMATICAL MODELLING THROUGH CALCULUS OF VARIATIONS AND DYNAMIC PROGRAMMING
33	P20MA033	V.VINOTHINI	A STUDY ON SUPER HARMONIC AND K-SUPER HARMONIC MEAN LABELING OF H- GRAPHS
34	P20MA034	S.VISHNUPRIYA	A STUDY ON CONTRA HARMONIC MEAN LABELLING OF GRAPHS
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**RESEARCH PROJECT DETAILS** 



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DEPARTMENT OF MATHS- 2022-2023				
SL.No	ROLL NUMBER	NAME	DETAILS OF ACTIVITY	
1	P21MA001	ABINAYA M	A STUDY ON S $\alpha$ -CONNECTEDNESS AND APPLICATION OF $\alpha$ -OPEN SETS IN TOPOLOGICAL SPACES	
2	P21MA002	ABINAYA S R	A STUDY ON APPLICATION OF MATHEMATICS IN SOCIAL AND BIOLOGICAL SCIENCE	
3	P21MA003	ABIRAMI M	A STUDY OF QUEUEING THEORY AND ITS APPLICATION	
4	P21MA004	ANJUGAM M	A STUDY ON CONCEPT AND RESULTS ON COMPLETE FUZZY METRIC SPACE	
5	P21MA005	BARANIKA S	A STUDY OF MATHEMATICAL MODELLING OF SHIP STABILITY	
6	P21MA006	вноома знактні м	A STUDY ON APPLICATION AND GRAPH THEORY IN SOCIAL MEDIA	
7	P21MA007	BHUVANESHWARI G	A STUDY ON THE ZERO DIVISOR GRAPH	
8	P21MA008	BHUVANESHWARI K	A STUDY ON CYCLE SPACE AND BOND SPACE	
9	P21MA009	BHUVANESHWARI M	A STUDY ON STANDARD EIGEN VECTORS AND INDICES OF INCLINE MATRICES	
10	P21MA010	DEEPIKA M	A STUDY ON SPECTRUM AND ENERGY OF GRAPH	
11	P21MA011	FAYZA ZULAIHA F	FUZZY NEURAL NETWORKS AND HYBRID FUZZY NEURAL NETWORKS	
12	P21MA012	KAMALI A	INTERVAL VALUED FUZZY SOFT MATRIX IN DECISION MAKING PROBLEM	
13	P21MA013	KANIMOZHI D	A STUDY ON IDEAL CLOSURE SPACES AND SEMI PRIME IDEAL IN TOPOLOGICAL SPACES	
14	P21MA014	KAVIPRIYA K	A STUDY ON EDGE COLORING OF FUZZY GRAPH AND ITS APPLICATION	
15	P21MA015	KEERTHANA A	A STUDY ON NETWORK TOPOLOGY AND ITS APPLICATIONS	
16	P21MA016	MADHUMITHA K	A STUDY ON RADIO MEAN SQUARE LABELING OF SOME GRAPHS	
17	P21MA017	MARAGATHAVALLI S	A STUDY ON APPLICATIONS OF MATHEMATICS	
18	P21MA018	MOHANAPRIYA A	A STUDY ON FUZZY BOOLEAN ALGEBRA WITH APPLICATIONS	

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19	P21MA019	MOHANA SUNDARI P	A STUDY ON RHOTRIX THEORY AND ITS APPLICATION
20	P21MA020	NALINAPRIYA S	A STUDY ON LUCKY EDGE LABELLING OF PLANAR GRID AND CORONA GRAPHS
21	P21MA021	PRIYADHARSHINI K	A STUDY ON DESIGN OF MEASURE OF FUZZY INCLUSION
22	P21MA022	PRIYADHARSHINI K	BILINEAR FORM IN FINITE DIMENSIONAL VECTOR
23	P21MA023	SANKARI S	A STUDY ON PROJECTION MATRICES
24	P21MA024	SANMUGAPRIYA M	A STUDY ON MINIMAL OPEN SETS ON
24			GENERALIZED TOPOLOGICAL SPACE
25	P21MA025	SARMILA M	A STUDY ON REFINED NETROSOPHIC MATRICES
26	P21MA026	SUBETHA K	A STUDY ON UNIFORM CONVERGENCE IN TOPOLOGY AND ALMOST UNIFORM CONVERGENCE IN TOPOLOGY
27	P21MA027	SUPRAJA P	A STUDY ON ROBOTICS TOPOLOGY AND ITS APPLICATIONS
28	P21MA028	SWETHA R	A STUDY ON HYPER GRAPHS
29	P21MA029	TAMILARASI B	A STUDY ON CODING THEORY AND ITS APPLICATIONS
30	P21MA030	VAISHNAVI M	FUZZY SOFT MATRICES AND ITS APPLICATION OF MEDICAL DIAGNASIS
31	P21MA031	VEERASELVI D	CARDIAL LABELLING OF SOME CYCLE AND SUBDIVISION OF SNAKES
32	P21MA032	VINISHA B	A STUDY ON INTERVALVALUED FUZZY MATRICES AND ITS APPLICATIONS



PRINCIPAL Government College for Women(Autonomous) KUMBAKONAM.

#### KUMBAKONAM

# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON SOFT SEMI SEPARATION AXIOMS AND CONNECTEDNESS" is a bonafide record of project work done by E. ABIRAMI, Reg.No: P17MA001 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

TERNAL GUIDE

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001 /

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 01, 04, 2019

Place : kumbakonam Date : 01 0 9 2019 EXTERNAL EXAMINER OR GRAMESH, M.Sc., M.Pill, Ph.D., MSIIT), MBA. Associate Professor of Mathematics Comment Arts College (Autonomous)

#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON TOPOLOGICAL GROUPS" is a bonafide record of project work done by S. ALAMELU, Reg.No: P17MA002 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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INTERNAL GUIDE

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonamous) Kumbakonam - 612 991.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>cole 04.2019</u>

Place : Kumbakonam Date : のいの4・2019



# GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS) KUMBAKONAM PG AND RESEARCH DEPARTMENT OF MATHEMATICS



# **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON LINEAR OPERATORS AND ORTHONORMAL SYSTEM" is a bonafide record of project work done by A. BALASUNDARI, Reg.No: P17MA003 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

6. Pajkuman D OF THE DEPARTMENT HEAD OF

Head, Department of Mathematics Government College for Women (Autonamous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 01.00, 2019

Place : Kumbakonam Date: 01.04.2019

EXTERNAL EXAMINER GRAMESH M Se MPHIL PH. D. MS(IT) SIBA associate Professor of Mathematics UMBAKONAM- 612 001

PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON DIFFERENT TYPES PAIRWISE B-CONTINUOUS FUNCTIONS IN BITOPOLOGICAL SPACES" is a bonafide record of project work done by B. BHUVANESHWARI, Reg.No: P17MA004 at Government College for Women(Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

TERNAL GUIDE

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomicus) Kumbakonam - 612 001./

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $\underline{r_1} + \underline{o} + \underline{c} + \underline{o} + \underline{o}$ 

EXTERNAL EXAMINER

TR G RAMESH, M.Sc. M.Fill, Ph.D., MSITH, MBA. Associate Professor of Mathematics ment Arts College (Autonominus) MBAKONAM- 612 001

Place : Kumbakonam Date : 61-04-0619

# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON MINIMAL GP – SEPARATION AXIOMS AND MINIMAL GP-CONTINUOUS MAPS" is a bonafide record of project work done by M. DEEPIKA, Reg.No: P17MA005 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

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Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001./

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $\underline{01040000}$ 

Place : Kumbakonam Date : 01,04,2019



DR.G.RAMESH, M.Sc. M.Pill, Ph.D. MSIT), MEA. Associate Professor of Mathematics Government Arts College (Autonomous) KUMBAKONAM- 612 001

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



## **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON SOFT INTERSECTION GROUPS" is a bonafide record of project work done by S. DEVI, Reg.No: P17MA006 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous)

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>o) o A 2019</u>



CR.G.RAMESH WSc. M.Pill, Ph.D. MSHT), MGA. Associate Professor of Mathematics Government Arts College (Autonomous) KUMBAKONAH - 612 001

Place : Kumbakonam Date : 01.04 . 2019

# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON GALOIS THEORY OVER THE RATIONALS" is a bonafide record of project work done by G.DHIVYA, Reg.No: P17MA007 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomicus) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 01.4.2019



Place : Kumbakonam Date : 01,4,2019

General College (Autonomous) KUMBAKONAN: 512 001

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON PRE ROW CONNECTEDNESS AND PRE ROW COMPACTNESS IN A TOPOLOGICAL SPACES" is a bonafide record of project work done by M.DHIVYA, Reg.No: P17MA008 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

: paffumari HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonamous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 01, 02, 2019

EXTERNAL EXAMINER

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Place : Kumbakonam Date :  $\sigma_1 \cdot \sigma_4 \cdot 2\sigma_1 \gamma$ 

## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON MULTI FUZZY GROUP AND ITS LEVEL SUBGROUPS" is a bonafide record of project work done Government College for Women by B.ESWARI, Reg.No: P17MA009 at (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

6- Paykuman HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakenam - 612 801.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 01.04.2019



Place : Kumbakonam Date: 01 . 124. 2019

GRAMESH.M.Sc. M.Pill. Ph.D. MS(IT), MBR. a sociate Professor of Mathematics Arts College (Autonomous) MBAKONAM- 612 001

#### KUMBAKONAM

## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON METHODS OF GAME THEORY" is a bonafide record of project work done by J.GUNASUNDARI, Reg.No: P17MA010 at Government College for Women (Autonomous). Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>@: 04,20</u>,9



Place : Kumbakonam Date :  $01 \cdot 04 \cdot 2019$ 

OF GRAMESH, M.Sc. M.Pill, Ph.D. MS(IT), MBA, Associate Professor of Mathematics and Arts College (Autonomous)

# GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS) KUMBAKONAM PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON MORE PENROSE INVERSE AND DRASING PSEUDO INVERSE OF A MATRIX" is a bonafide record of project work done by S. KALAIYARASI, Reg.No: P17MA011 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 061.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>D), 04, 2019</u>

EXTERNAL

Place: Kumbakonam Date: です、のす、2019

OR GRAMESH, M.Sc. M. Pill, Ph.D. MSITT, MBA. Associate Professor of Mathematics UMBAKONAM- 612 001

#### **KUMBAKONAM**

# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



# **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON PARTIALLY ORDERED R- SEMI GROUPS AND PARTIAL ACTION OF INVERSE SEMI GROUPS" is a bonafide record of project work done by Y. KANIMOZHI, Reg.No: P17MA012 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>el · (2)</u> · <u>(2)</u> · <u>(2)</u>

Place : Kumbakonam Date : 01.04.2019



DR.G.RAMESH, M.Sc. M.Pill, Ph.D. MSIIT), MBA, Associate Professor of Mathematics The Arts College (Autonomous) UMBAKONAM- 612 001

#### KUMBAKONAM

# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON ANTI HAUSDORFF SPACE AND IDEAL HAUSDORFF SPACE" is a bonafide record of project work done by K. KEERTHANA, Reg.No: P17MA014 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>(r), (24, 20)</u> 9

Place : Kumbakonam Date :  $0) \cdot 04 \cdot 2 \cdot 09$ 



OR GRAMESH, M.Sc. M.Pill. Ph.D. MSITO, MBA. Associate Professor of Mathematics mont Arts College (Autonomous)

# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON GELFAND THEORY" is a bonafide record of project work done by M.L. MEENATCHI, Reg.No: P17MA015 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

E DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonoli 125) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $r_1 \cdot c_4 \cdot 2c_1 \circ_1$ 

Place:Kumbakonam Date: 01.04.2019



# **GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)** KUMBAKONAM PG AND RESEARCH DEPARTMENT OF MATHEMATICS



## **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON ALPHA FUZZY AND ALPHA ANTI FUZZY SUBGROUPS" is a bonafide record of project work done by S. MEERA, Reg.No: P17MA016 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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OF THE DEPARTMENT HEAD

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on ニニロター クロ 9

EXTERNAL EXAM

S G RAMESH.M.Sc.,M.Pill, Ph.D. MS(IT), MBA. nociate Professor of Mathematics BAKONAM- 612 001

Place : Kumbakonam Date: 01.04.2019

#### KUMBAKONAM

#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON FUZZY SIMPLY \* CONTINUOUS FUNCTION" is a bonafide record of project work done by K. NITHYA, Reg.No: P17MA017 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

D OF THE DEPARTMENT

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $01 \cdot 04 \cdot 2019$ 



Associate Professor of Mathematics

Place : Kumbakonam Date : 01,04,2009

#### **KUMBAKONAM**

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SINGLE VARIABLE AND MULTI VARIATE FORMAL POWER SERIES" is a bonafide record of project work done by S. PRIYANKA, Reg.No: P17MA018 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF

### MATHEMATICS.

G.VEMBARASI

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>01.04.2019</u>

Place : Kumbakonam Date : 6) '4 DOI9.



#### **KUMBAKONAM**

#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SINGLE VARIABLE AND MULTI VARIATE FORMAL POWER SERIES" is a bonafide record of project work done by M. RADHA, Reg.No: P17MA019 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE EMAS USUDAROLIJ

Hernan

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $\underline{\mathfrak{O}}$ :



Place : Kumbakonam Date :  $01 \cdot 04 \cdot 2019$  ·

CF GRAMESH, M.Sc. M.Pill, Ph.D. MS(IT), MBA, Associate Professor of Mathematics Comment Arts College (Autonomous) CUMBAKONAM- 612 001

#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON B-CONNECTEDNESS AND B-DISCONNECTEDNESS" is a bonafide record of project work done by V. RAJESHWARI, Reg.No: P17MA020 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $1 \cdot 4 \cdot 2019$ .



DR GRAMESH M.Sc. M.Pill, Ph.D. MS(IT), MBA, Associate Professor of Mathematics Associate Arts College (Autonomous) KUMBAKONAM- 612 001

Place : Kumbakonam Date : 1 - 4 . 2019

#### KUMBAKONAM

PG AND RESEARCH DEPARTMENT OF MATHEMATICS



## BONAFIDE CERTIFICATE

STUDY ON This is to certify that this project entitled "A CHARACTERIZATION OF LOW SEPARATION AXIOMS IN VIA ALPHA-OPEN SETS AND ALPHA - CLOSURE OPERATOR" is a bonafide record of project work done by M. RAMYA, Reg.No: P17MA021 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Leurin Maths GUWAD, ICMU

5. Rafferman HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous)

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 1.4.2019.

EXTERNA

RAMESH MSc MPH Ph.D. MSITT, MBA. Associate Professor of Mathematics inment Arts College (Autonomous) 1384KONAM- 612 001

Place : Kumbakonam Date: 1.4,2019.

#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON MINIMAL TOPOLOGY" is a bonafide record of project work done by M. SANGEETHA, Reg.No: P17MA022 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE 10. LLARPACIAM)

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $1 \cdot 4 \cdot 2009$ .



DR GRAMESH, M Sc. M. Pill. Ph.D. MS(IT), MBA, Associate Professor of Mathematics comment Arts College (Autonomous) KUMBAKONAM- 612 001

Place : Kumbakonam Date : 1 . 4 . 2.019.

#### KUMBAKONAM

PG AND RESEARCH DEPARTMENT OF MATHEMATICS



# BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON COHOMOLOGY OF FIRST AND PROFINITE GROUPS" is a bonafide record of project work done by M. SANTHIYA, Reg.No: P17MA023 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

21-2

INTERNAL GUIDE CMARS U SUDAROLI

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 061.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 1.4.2019.



DR.G.RAMESH,M.Sc., M. CHI, Ph.D. MSHTI, MEA.

Associate Professor of Mathematics Government Arts College (Autonomous) KUMBAKONAM- 612 001

Place : Kumbakonam Date: 1-4.2019.

#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON FUZZY ALMOST AND PAIRWISE FUZZY ALMOST RESOLVABLE SPACES" is a bonafide record of project work done by M. SANTHIYA, Reg.No: P17MA024 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Mr. P. Latha omatics GIOW (A), Knue:

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.,

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 1.4.2019.

Place : Kumbakonam Date : 1, 4, 2019.

EXTERNAL EXAMINER

CS & RAMESH M Sc. M PIII. Ph.D. MSIM. MA Associate Professor of Mathematics Government Arts College (Autonomous) KUMBAKONAM- 612 001

## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON PELL'S EQUATION AND ITS APPLICATIONS IN NUMBER THEORY" is a bonafide record of project work done by S. SARANYA, Reg.No: P17MA025 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

P. St. INTERNAL GUIDE Mrs. P. LATHA Lectures in Mathematica Gicw(A), Kumbalkonam

Herman THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 901.

Place : Kumbakonam Date : ハッロチ・ンがり



CERAMEON MSC Mention Mathematics Associate Professor of Mathematics

#### KUMBAKONAM

#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON PRE-GAMMA -OPEN SETS AND SEPARATION AXIOMS" is a bonafide record of project work done by B. SHALINI, Reg.No: P17MA026 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

P. N

INTERNAL GUIDE Nrs. P. LATHA Lecturer in Mathematics GEWIAL, KMUL

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 1.4.2019

EXTERNAL EXAMINER

C. GRAMESH, M.Sc. M.Pill, Ph.D. MS(T), MBA, Associate Professor of Mathematics ment Arts College (Autonemous) MBAKONAM- 612.001

Place : Kumbakonam Date : 1 . 4 . 2019

## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON FUZZY SIGMA -BAIRE SPACES" is a bonafide record of project work done by S. SOWNDARIYA, Reg.No: P17MA027 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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5. Affermani

HEAD OF THE DEPARTMENT Head, Department of Mathematic Government College for Women (Aulanein Bea), Kumbakonam - 612 001,

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on ..l...4.2019

Place : Kumbakonam Date : 1 · 4 · 2019



GRAMESH, M.Sc. M.Pill, Ph.D. MS(IT), MBA. Sociate Professor of Mathematics MEAKONAM- 612 001
# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON FREE GROUPS AND ITS PROPERTIES" is a bonafide record of project work done by A. SURYA, Reg.No: P17MA028 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

IC . La pre-10-1CARPADAM

2. Raffermani

Head, Department of Mathematics Government College for Women (Autonom Just) Kumbakenam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $1 \cdot 4 \cdot 2 \operatorname{pl} 9$ 



C PAMESH, M.Sc. M.Pill. Ph.D. MSITT, MA. Sociate Professor of Mathematics MEAKONAM- 612 001

Place : Kumbakonam Date : 1.4.2019

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON (Q,L)-FUZZY SUBRING AND (Q,L)- FUZZY SUBSEMIRING" is a bonafide record of project work done by K. SURYA, Reg.No: P17MA029 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE K. ICARPAGIAM

, faffunan HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government Cellege for Wemen (Autonomous) Kumbakonam - 612 001.4

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $1 \cdot 4 \cdot 2019$ .

Place : Kumbakonam Date : 1 . 4. 2019



## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SEPARATION AXIOMS FOR SUPRA TOPOLOGICAL SPACES" is a bonafide record of project work done by G. VIMALA, Reg.No: P17MA030 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.



S. Joffernari

HEAD OF THE DEPARTMENT Head. Department of Mathematics Government College for Women (Autonomicula Kumbakonam - 612 001)

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 1.4.2019.

Place : Kumbakonam Date :  $1 \cdot 4 \cdot 2019$ 



RAMESH M.Sc. M.Pill, Ph.D. MSIIT), MEA riate Professor of Mathematics nt Arts College (Autonomous) BAKONAM- 612 004

## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SCOTT TOPOLOGY AND ITS RELATION TO THE ALEXANDROFF TOPOLOGY" is a bonafide record of project work done by R. VISHNUPRIYAI, Reg.No: P17MA031 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

AGR BUILDAND INTERNAL GUIDE MELLAICR RAJAVAL LECTURES IN MICHINGHUS ISON CAN REPHODICISION

HEAD OF THE DEPARTMENT

Head, Department of Mathematica Government College for Women (Autonomicea) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on (1 + 3 + 2x) (3).

Place : Kumbakonam Date : 1 . 4 . 2019



#### **GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)**

#### **KUMBAKONAM**

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON TENSOR PRODUCT OF MODULES" is a bonafide record of project work done by K. VISHNUPRIYA, Reg.No: P17MA032 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

ACR AUTON NVSS AKR. RAJAVAL Lectures in mathematics GENKIAT KUMMARCOMOIND.

HEAD OF THE DEPARTMENT

Head. Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on ...)...A.2019



AMESH M.Sc. M.PIIL Ph.O. MSITT, MBA ni Arts College (Autonomous) Arts College (Autonomous)

Place : kumbakonam Date :  $1 \cdot 4 \cdot 2019$ .

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON BC-SEPARATION AXIOMS IN TOPOLOGICAL SPACES" is a bonafide record of project work done by R. VISHNUPRIYAI, Reg.No: P17MA033 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Jo G santhyabharathi

Koykeman HEAD OF THE DEPARTMENT Head, Department of Maine Generoment Callege for Women (Aut Huff aus) Kumbakanam - 612 00

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 1, 4, 2019.

Place : Kumbakonam Date : ) • 4 • 2019 .



## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



## **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON COMPLETION OF A METRIC SPACE" is a bonafide record of project work done by YOGALAKSHMI.R, Reg.No: P17MA034 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Do G. sahitauphonathi Lectures in Mathematics lectures in r

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HEAD OF THE DEPARTMENT; Head, Department of Mathi Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 1, 3, 2019.

Place : Kumbakonam Date : 1 · 4 · 2019 .



nt Arts College (Autonomous)

## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON SOFT INTERSECTION IDEALS OF LA-SEMI GROUP" is a bonafide record of project work done by R. YUVARANI, Reg.No: P17MA035 at Government College for Women (Autonomous), Kumbakonam during this year 2017-2019 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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PAMESH M Sc. M.Pill. Ph.D. MS(T), MSC. inte Professor of Mathematics of Arts College (Autonomous) BAKONAM- 612 001

Place : Kumbakonam Date :  $\uparrow \cdot 4 \cdot 2009$ .

#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON CYCLIC CODES AND GENERATOR POLYNOMIAL OF CYCLIC CODES" is a bonafide record of project work done by S.A.JITHA, Reg. No: P18MA001 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

5. Jeffermani HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous)

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 19.920

Place : Kumbakonam Date : 19.9.2020

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#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON MINIMUM HAMMING DISTANCE AND HAMMING CODE" is a bonafide record of project work done by R.ARTHI, Reg. No: P18MA002 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $19-9\cdot2020$ 

Place : Kumbakonam Date : 9.9.2020

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EXTERNAL EXAMINER Ars) N. SARALA M.Sc. M.Phil. B.Ed. Phd PO And Reserch Department Of Mathematics



BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SUPER VERTEX GRACEFUL LABELING OF GRAPHS" is a bonafide record of project work done by S. ARUNA, Reg. No: P18MA003 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date : 9 9 2020

Mr. Sacal

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# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON WEAKLY STAR g CLOSED SETS AND SEMI WEAKLY g STAR CLOSED SETS IN TOPOLOGICAL SPACES" is a bonafide record of project work done by S. BOWYA, Reg. No: P18MA004 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Mr. Jan

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Place : Kumbakonam Date : 19. 7. 2020

# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON COMPLEMENT AND BI - COMPLEMENT REDUCIBLE GRAPHS (OR) COGRAPH AND BI - COGRAPH " is a bonafide record of project work done by L. DEEPIKA, Reg. No: P18MA005 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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On (Mrs) N. SARALA, M. S., M.Phil, B.Ed., Phd., Head / Associate Professor. PG And Resarch Department Of Mathematics, ADM College For Women (Autonomous), Nagepattment - 611 801

Place : Kumbakonam Date : 19, 9-2020



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SOME NEW SETS IN IDEAL TOPOLOGICAL SPACES" is a bonafide record of project work done by G. DIVYA, Reg. No: P18MA006 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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re. C C EXTERNAL EXAMINER

Place : Kumbakonam Date : 19.9.2020



BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON APPLICATION OF SOFT SET THEORY USING DECISION MAKING PROBLEM" is a bonafide record of project work done by S. ELAMATHY, Reg. No: P18MA007 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date : 9.09.2020

#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SOFT GENERALIZED CLOSED SETS IN SOFT TOPOLOGICAL SPACES" is a bonafide record of project work done by R. GEETHA, Reg. No: P18MA009 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 19.9.25.

Place : Kumbakonam Date : | 9, 09, 2020

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# BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SOLUTION OF ORDINARY DIFFERENTIAL SYSTEM WITH FIRST ORDER DIFFERENTIAL EQUATION AND LINEAR TRANSFORMATION IN SYMMETRY GROUP" is a bonafide record of project work done by M. HARIPRIYA, Reg. No: P18MA010 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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m. c l ENTERNAL EXAMINER

## GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)

#### KUMBAKONAM

## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



BONAFIDE CERTIFICATE

This is to certify that this project estimized "A STUDY ON LEFT BI -QUASI IDEAL OF SEMIRINGS" is a boundide record of project work done by K. JAYAPRIYA, Reg. No: P18MA011 at Government College for Warnen (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date : 19.09.2030



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON REGULAR GENERALIZED OPENSETS IN TOPOLOGICAL SPACES" is a bonafide record of project work done by R. JEEVA, Reg. No: P18MA012 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date : 19.09.2020

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## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SOFT INTERSECTION NEAR RINGS AND SOFT INTERSECTION SET IN GAMMA NEAR RINGS" is a bonafide record of project work done by P. KALAISELVI, Reg. No: P18MA013 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON k -NEIGHBORHOOD PRIME LABELING OF GRAPHS" is a bonafide record of project work done by R. KAVIYA, Reg. No: P18MA014 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SOFT SEPARATION AXIOMS AND SOFT SEMI SEPARATION AXIOMS IN SOFT TOPOLOGICAL SPACES" is a bonafide record of project work done by K. KEERTHIKA, Reg. No: P18MA015 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date : 19-09-2020

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON FUZZY SOFT K - HAUSDORFF SPACES" is a bonafide record of project work done by J. KRISHNAVENI, Reg. No: P18MA016 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON RADIO MEAN SQUARE LABELING OF SOME GRAPHS" is a bonafide record of project work done by C. LOGESWARI, Reg. No: P18MA017 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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HEAD OF THE DEPARTMENT Head, Department of Mathematics Government Sciege for Wolfred A community Kumbakonam - 612 001.

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Mr. Sacale

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Place : Kumbakonam Date : 9 9 2000



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON K - SUPER HARMONIC MEAN LABELING OF GRAPHS" is a bonafide record of project work done by M. MITHURA, Reg. No: P18MA018 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Nr. Sanal

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Place : Kumbakonam Date : (9 · 09 · 20<sup>20</sup>



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This is to certify that this project entitled "A STUDY ON F -GEOMETRIC AND SUPER GEOMETRIC MEAN LABELING OF GRAPHS" is a bonafide record of project work done by M. MUTHULAKSHMI, Reg. No: P18MA019 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 19.09.2020

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Place : Kumbakonam 19.09 2020 Date :

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This is to certify that this project entitled "A STUDY ON GENERALIZED b STAR CLOSED SETS AND SEMI GENERALIZED STAR - b CLOSED SETS IN TOPOLOGICAL SPACES" is a bonafide record of project work done by B. NANTHINI, Reg. No: P18MA020 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date : 19.09.2026

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## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON F - ROOT SQUARE MEAN LABELING OF GRAPHS OBTAINED FROM PATHS" is a bonafide record of project work done by L. NIVETHA, Reg. No: P18MA021 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

5- Rofferman HEAD OF THE DEPARTMENT

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on \_\_\_\_\_\_ 9 09.2025

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Place : Kumbakonam Date : 19 09 2020

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON \* -GENERALIZEDSEMI COMPACTNESS AND \* - GENERALIZED SEMI CONNECTEDNESS IN TOPOLOGICAL SPACES" is a bonafide record of project work done by S. PAVITHRA, Reg. No: P18MA022 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Nr. Sacala

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Place : Kumbakonam Date : 19 09.2020



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SUPER LEHMER - 3 MEAN LABELING" is a bonafide record of project work done by G. PRATHIPA, Reg. No: P18MA023 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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PG AND RESEARCH DEPARTMENT OF MATHEMATICS



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This is to certify that this project entitled "A STUDY ON VARIOUS LABELING ON BULL GRAPH AND ITS APPLICATIONS" is a bonafide record of project work done by C. PRIYA, Reg. No: P18MA024 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Nr. Saco

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Place : Kumbakonam Date : 19 09 2020

## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON delta -COLSED SETS IN TOPOLOGICAL SAPACES" is a bonafide record of project work done by S. PRIYADHARSHINI, Reg. No: P18MA025 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

ACCR Runpul INTERNAL GUIDE 1905 AKR-ROSAYAL LOCTURES in Mothersonics ACWELAD, Kumbakowam.

5. Poffamari

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001 g

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>19.09.20</u>20

Place : Kumbakonam Date : 19.09.2020

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## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SOFT MATRIX AND FUZZY SOFT MATRIX THEORY AND ITS DECISION MAKING" is a bonafide record of project work done by A. PRIYANGA, Reg. No: P18MA026 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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EXTERNAL EXAMINER

Place : Kumbakonam Date : 19 09 - 2026

# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON g\*s -CONTINUOUS FUNCTION AND g\*s - HOMEOMORPHISM IN TOPOLOGICAL SPACES" is a bonafide record of project work done by R. REVATHI, Reg. No: P18MA027 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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5. feftunari HEAD OF THE DEPARTMENT

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on \_ 19 09 2020

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Place : Kumbakonam Date: 19.09.2020



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON MATHEMATICAL MODELING ON CANCER TREATMENT" is a bonafide record of project work done by S. REVATHI, Reg. No: P18MA028 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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5- Kafferman HEAD OF THE DEPARTMENT

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Place : Kumbakonam Date : 19-09-2020



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON GENERALIZED **b** - COLSED SETS IN TOPOLOGICAL SPACES" is a bonafide record of project work done by P. SANKARI, Reg. No: P18MA029 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

ACR · Runger INTERNAL GUIDE

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5. Hoffermani HEAD OF THE DEPARTMENT

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Place : Kumbakonam Date : / 9 - 09 - 20 20

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PG AND RESEARCH DEPARTMENT OF MATHEMATICS



BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SECOND ORDER LINEAR EQUATION AND ITS APPLICATION" is a bonafide record of project work done by R. SATHYA, Reg. No: P18MA030 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on \_\_\_\_\_\_ 19-09\_20

Place : Kumbakonam Date : 19 09 2420

r local

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## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON POWER MEAN LABELING OF GRAPHS" is a bonafide record of project work done by S. SINDHUJA, Reg. No: P18MA031 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), kumbakonam on <u>19.09.20</u>,20

r: Sacalo

Place : Kumbakonam Date : 19 09-2020

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON LINEAR CODES AND PARITY CHECK MATRIX" is a bonafide record of project work done by N. SIVARANJANI, Reg. No: P18MA032 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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18. Sacal

EXTERNAL EXAMINER

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Place : Kumbakonam Date : 19 09, 2020



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON Sg -CONTINUOUS FUNCTION AND sgp CONTINUOUS FUNCTION IN TOPOLOGICAL SPACES" is a bonafide record of project work done by S. SUGANTHI, Reg. No: P18MA034 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

D. G. Salithyabharathi in mathematics Letaren

5. Jajkuman

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 091,

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 19.09-2020

N. Sacol

EXTERNAL EXAMINER

Place : Kumbakonam Date : /9 - 09 . 20<sup>20</sup>

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON TOPOLOGICAL VECTOR SPACES" is a bonafide record of project work done by M. UMADEVI, Reg. No: P18MA035 at Government College for Women (Autonomous), Kumbakonam during this year 2018-2020 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

U. R. 1 & C. INTERNAL GUIDE [ MTS. U. SUDA ROLI ]

G. Raffernan IEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>19 09.20</u>20

Place : Kumbakonam Date : 19.09.2020

Jr. Sacalo

EXTERNAL EXAMINER

Dr. Die st. N. S. BECKLAN, A. H. Son, H. Pell, R. Sal, Peak, Stander / Arman, H. Pred-Olin, And And Facamer Donne, and Dr. Laborateristics, And Cachings First reveals and memory and Research theory of the Str.

### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON VARIOUS LABELING AND COLOURING OF BULL GRAPHS" is a bonafide record of project work done by ABINAYA. M, Reg.No: P19MA001 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE (NO G. GN. VEMBARASI)

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HEAD OF THE DEPARTMENT Head Department of Mathematics Government College (do Winnen 4.6 WAD 2009) Winnehkenenn 6622009)

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Place : Kumbakonam Date : 21.4.21

EXAMINER

**Br. K. GUNASEKARAN**, MSc. MPhil, B.Ed. Ph.D., Principal (i/c), Govt. Arts and Science College, Kuthalam, Mayiladuthurai Dt., Tamil Nadu.



### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON INTUITIONISTIC FUZZY GRAPH" is a bonafide record of project work done by ABINAYA. N, Reg.No: P19MA002 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE (Dr. GAAMUDA)

THE DEPARTMENT HEAD Head, Department of Mathematics Government College for Women (Autonomous) Kumbakenam - 612 801.j

Submitted for the viva voce examination held at Government College for Women (Autonomous), kumbakonam on 21.4.21.

Place : Kumbakonam Date: 21.4.21

EXTERNAL EXAMINER

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#### **GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)**

#### **KUMBAKONAM**

#### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SOFT MATRIX AND FUZZY SOFT MATRIX THEORY AND ITS DECISION MAKING" is a bonafide record of project work done by ANUSUYA. K, Reg.No: P19MA003 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirement for the award of the degree of MASTER OF MATHEMATICS.

h. Moffeman INTERNAL GUIDE SR

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Place : Kumbakonam Date: 21.4.2)

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#### **GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS)**

#### KUMBAKONAM

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**BONAFIDE CERTIFICATE** 

This is to certify that this project entitled "A STUDY ON FRACTIONAL ARBORICITY AND MATROID METHODS" is a bonafide record of project work done by DAYANA. P, Reg.No: P19MA004 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 091.

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Place : Kumbakonam Date : 24.4.21

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Dr. K. GUNASEKARAN, M.Sc. M.Phil, B.Ed. Ph.D., Principal (i/c), Govt. Arts and Science College, Kuthalam, Mayiladuthurai Dt., Tamil Nadu.





### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON ODD AND EVEN GRACEFUL LABELING OF A GRAPH" is a bonafide record of project work done by DHIVYA. T, Reg.No: P19MA005 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirement for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE G. WEMBARAS,

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HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.,

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Place : Kumbakonam Date: 21.4.21

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## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON FUZZY DOT SUB-ALGEBRAS AND FUZZY DOT IDEALS OF B-ALGEBRAS" is a bonafide record of project work done by DURGA. K, Reg.No: P19MA006 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Head, Department of Mathematics -Gevernment College fer Women (Autonomous) Kumbakonam - 612 001,

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Place : Kumbakonam Date: 21.4.21

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON PRIME LABELING OF UNION GRAPHS" is a bonafide record of project work done by GAYATHRI. A, Reg.No: P19MA007 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Leiburgi ich Mathemahiy Gicw (A), KMV.

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## PG AND RESEARCH DEPARTMENT OF MATHEMATICS



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This is to certify that this project entitled "A STUDY ONBITOPOLOGICAL SPACES" is a bonafide record of project work done by ISHWARIYA. R, Reg.No: P19MA008 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

AL GUIDE INTER REI

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $21 \cdot 4 \cdot 21$ 

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### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON GRAPHOIDAL COVERING AND 2-GRAPHOIDAL COVERING NUMBER OF A GRAPH" is a bonafide record of project work done by KALAIMANI. K, Reg.No: P19MA009 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON HARMONIOUS LABELING AND HARMONIOUS COLOURING OF GRAPHS" is a bonafide record of project work done by KALAIMATHI. A, Reg.No: P19MA010 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Cerosan in Maths GICW (AZ, ICMV.

S. Roffernan

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakenam - 612 001.

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Place : Kumbakonam Date: 21.04-2021

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#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON APPLICATION OF QUEUING THEORY APPLIED IN OUR DAY TO DAY LIFE" is a bonafide record of project work done by KALPANA. S, Reg.No: P19MA011 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Lactureignés Mathematics, Gicwca, Kumbakonam.

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HEAD OF THE DEPARTMENT Head, Devaltiment of Mathematics Government College 16 Wolfer Trationomous)

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5 5 For for 21 14/21

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Place : Kumbakonam Date : 21 · 4 · 2021



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON CYCLE CONNECTIVITY AND CONNECTIVITY ANALYSIS OF CYCLICALLY BALANCED FUZZY GRAPHS" is a bonafide record of project work done by KAMALI. R, Reg.No: P19MA012 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

(Dr. GA. AMUDA)

Eman HEAD OF THE DEPARTMENT

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6 5 ho for 21/4/21

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON UPPER BOUNDS ON THE L(2,1)-LABELING NUMBER OF GRAPHS WITH MAXIMUM DEGREE" is a bonafide record of project work done by KANIMOZHI. E, Reg.No: P19MA013 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Leingen in Miths Grew (A), Jen V

5. Affermani

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.4

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $2! \cdot 4 \cdot 202 f$ 

Place : Kumbakonam Date : D) · 4. 2021

Principal (i/c),

Govt. Arts and Science College, Kuthalam, Mayiladuthurai Dt., Tamil Nadu.

This is to certify that this project entitled "A STUDY ON SUPER MEAN LABELING OF GRAPHS" is a bonafide record of project work done by (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE G. WEMBARASI

5. Raffunan HEAD OF THE DEPARTMENT

DEPARTMENT OF MATHEMATICS

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Head, Department of Mathematics Government College for Women (Autonomous)

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 21, 4, 2024

Place : Kumbakonam Date: 2) , 4, 202)

100 101 21 4 21 60

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#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON ANALYTIC ODD MEAN LABELING OF GRAPHS" is a bonafide record of project work done by KAVIYASRI. C, Reg.No: P19MA015 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

U.L. Ladl. INTERNAL GUIDE [Mrs +1 SUDAROL]]

5. Riffumani

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.,

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10214/21

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Place : Kumbakonam Date : 21. 4. 2021





#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON DISTANCE AND DISSIMILARITY MEASURE OF PICTURE FUZZY SET" is a bonafide record of project work done by KOWSALYA. A, Reg.No: P19MA017 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Leleureres in Mathematics. Cicw(A), Kumbakonan,

G. Rajpumani

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>11, 4,202</u>

Place : Kumbakonam Date : シノ・チ・2021

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON PRODUCT CORDIAL LABELING AND EDGE PRODUCT CORDIAL LABELING OF GRAPHS" is a bonafide record of project work done by LAKSHMI. S, Reg.No: P19MA018 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE in Math GICW(A)

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON THEORY OF MODULES AND FUZZY MODULES" is a bonafide record of project work done by LAKSHMIPRIYA. M, Reg.No: P19MA019 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Human HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001

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Place : Kumbakonam Date : 21,4.2021

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SOFT SOMEWHERE DENSE SETS ON SOFT TOPOLOGICAL SPACE" is a bonafide record of project work done by LAVANYA. R, Reg.No: P19MA020 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

P.Z INTERNAL GUIDE Lections in Mathematics Growla), Kumbalonon

luman

HEAD OF THE DEPARTMENT Head, Bepartment of Matrie Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>1991</u>

Place: Kumbakonam Date: 9 · 4·2021

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON TYPES OF LATTICES" is a bonafide record of project work done by LISHA. K, Reg.No: P19MA021 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

**INTERNAL GUIDE** RG

lunan HEAD OF THE DEPARTMENT

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>D1 · 4 · 200</u>

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## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON REGULAR AND IRREGULAR FUZZY GRAPHS" is a bonafide record of project work done by MULLAI. B, Reg.No: P19MA022 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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6. Refferment HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001:

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 31.4.202

Place : Kumbakonam Date : 21.4.2021

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PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ONADJOINT THEORY OF SQUARE FUZZY MATRIX" is a bonafide record of project work done by NITHYA. E, Reg.No: P19MA023 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

, Rofferman' TERNAL GUIDE

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Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 901.;

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1414 pr21

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Place : Kumbakonam Date : إور ب



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON CHAPMAN-KOLMOGOROV EQUATION IN FORWARD AND BACKWARD EQUATIONS AND ITS APPLICATION" is a bonafide record of project work done by PAVATHARANI. P. S, Reg.No: P19MA024 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE turge is Math (new CA)

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

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Dr. K. GUNASEKARAN, M.Sc. M.Phil. B.Ed., Ph.D., Principal (i/c), Govt. Arts and Science College, Kuthalam, Mayiladuthurai Dt., Tamil Nadu.

Place : Kumbakonam Date: 21,4,202/



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ONFINITE DIMENSIONAL TOPOLOGICAL VECTOR SPACE AND CONNECTION TO SEMINORM" is a bonafide record of project work done by PRIYATHARSHINI. R, Reg.No: P19MA025 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

L GUIDE Dr. G. Jahrt Babharathi in Mathematic Loctorie

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 901.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>o 1, y 102</u>)

Place : Kumbakonam Date : 21. (4.1 202)

EXTERNAL EXAMINER Dr. K. GUNASEKARAN, M.Sc., M.Phil, B.Ed., Ph.D., Principal (i/c), Govt. Arts and Science College, Kuthalam, Mayiladuthurai Dt., Tamil N



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON VERTEX MAGIC TOTAL LABELING AND ODD AND EVEN VERTEX MAGIC TOTAL LABELING OF SOME GRAPHS" is a bonafide record of project work done by SANTHIYA. A, Reg.No: P19MA026 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

(Drog AMUDA)

Gevernment College for Women (Autonemous) Kumbakonam - 612 001.

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10 21

EXTERNAL EXAMINER Dr.K.GUNASEKARAN, M.Sc., M.Fill, B.Ed., Ph.D., Principal (i/c), Govt. Arts and Science College, Kuthalam, Mayiladuthuration Tamil N

Place : Kumbakonam Date : 21 · 4. 2021

PG AND RESEARCH DEPARTMENT OF MATHEMATICS



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON TOTAL GRAPH AND SEMI TOTAL GRAPH" is a bonafide record of project work done by SHANTHINI. V, Reg.No: P19MA027 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

1c·1C INTERNAL

Keynani **IE DEPARTMENT** 

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 901.,

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>21.4100</u>

21

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Place : Kumbakonam Date : 21, 4, 202

PG AND RESEARCH DEPARTMENT OF MATHEMATICS



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON ROOT SQUARE MEAN LABELING OF GRAPHS" is a bonafide record of project work done by SNEHALAKSHMI. T, Reg.No: P19MA028 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

[Mm. M. DEVI]

Lectures in Mathematics. GICW (A1, KUMBAKONAM

5: Haffuman

HEAD OF THE DEPARTMENT Hoad, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>0; (4, 202.</u>

Place : Kumbakonam Date : 21.4.2021

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## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON FUZZY TOPOLOGICAL SPACE AND COMPACT FUZZY TOPOLOGICAL SPACE" is a bonafide record of project work done by SOWMYA. S, Reg.No: P19MA029 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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50 mp214/21

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Place : Kumbakonam Date : 21,4.2021



## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ONSEPARABILITY AND COMPACTNESS IN SOFT TOPOLOGICAL SPACES" is a bonafide record of project work done by TAMILARASI. R, Reg.No: P19MA030 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

AL GUIDE hi thyabharathi anathemat u

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>) ' 4 ' 2 ov</u>

Place : Kumbakonam Date: 21, 4,202)

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## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON ISOMORPHISM ON FUZZY GRAPHS AND COMPLEMENTARY FUZZY GRAPHS" is a bonafide record of project work done by THENMOZHI. S, Reg.No: P19MA031 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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## BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON NON-COMMUTING GRAPH OF A GROUP" is a bonafide record of project work done by VARSHA. S, Reg.No: P19MA032 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date: 21.4.2021




### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON FUZZY INNER PRODUCT SPACE AND FINITE FUZZY ORTHOGONAL SET" is a bonafide record of project work done by VARSHA RAMAN. P, Reg.No: P19MA033 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirement for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 21, 42021

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON GENERALIZATION OF SOME FUZZY CONTINUOUS FUNCTIONS" is a bonafide record of project work done by VENGATESWARI .S, Reg.No: P19MA034 at Government College for Women (Autonomous), Kumbakonam during this year 2019-2021 in partial fulfilment of the requirement for the award of the degree of MASTER OF MATHEMATICS.

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HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>D</u>, <u>u</u>, <u>102</u>

Place : Kumbakonam Date : 2), (p. 202)

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SOFT MATRIX THEORYAND ITS DECISION MAKING" is a bonafide record of project work done by S. AARTHI, Reg. No: P20MA001 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $\underline{q}$ ,  $\underline{b}$ ,  $\underline{2022}$ 

Place : Kumbakonam Date : 9.6.2012

S. Adag external examiner

LI.Dr.S.ABBAS, M.Sc. M.Phil. M.B.A. M.C.A. Ph.D. Assistant Professor P.G.S. Research Department of Mathematics Khadir Mohldeen College Adirampattinam - 614 701



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON MATRIX GAMES BASED ON GRAPH" is a bonafide record of project work done by T.AARTHI, Reg. No: P20MA002 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

ACR Ruyer INTERNAL GUIDE DO OKR, RAJAYAL LECTUDEY in Mathematics Gewich), Kumbakonam.

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON ANALYTIC ODD AND EVEN MEAN LABELING GRAPH" is a bonafide record of project work done by A.ABIRAMI, Reg. No: P20MA003 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON TIMETABLING USING GRAPH COLOURING" is a bonafide record of project work done by G.ANUSUYA, Reg. No: P20MA004 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

Or G. Sahithyabh

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>9.6.2022</u>.

Place : Kumbakonam Date : 9,6,2022,

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### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON FUZZY GRAPH AND FUZZY BI-MAGIC LABELING ON CYCLE GRAPH AND STAR GRAPH" is a bonafide record of project work done by M.ANUSUYA, Reg. No: P20MA005 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

Leuhnum Marths Crew(A), ICMU

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HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001./

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>9.6.2022</u>

Place : Kumbakonam Date : 9,6,2022

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Adirampattinam - 614 701



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON LAPLACIAN MATRIX AND LAPLACIAN EIGENVALUES OF THRESHOLD GRAPHS" is a bonafide record of project work done by M.DURGA, Reg. No: P20MA006 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirement for the award of the degree of MASTER OF MATHEMATICS.

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Dr. AKR - RAJAYAL Lecturer in matumatics howeld), kumbakaram.

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Place : Kumbakonam Date : 9,6,2022

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON MATCHING AND COLOURING IN FUZZY LABELING OF GRAPH" is a bonafide record of project work done by M.ELAKKIYA, Reg. No: P20MA007 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>G. G. 202.2</u>

Place : Kumbakonam Date : 9,6 : 2022

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This is to certify that this project entitled "A STUDY ON DOMINATION IN FUZZY GRAPH" is a bonafide record of project work done by U.GOWSALYA, Reg. No: P20MA008 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

ACR. Ruyful INTERNAL GUIDE Dr. AKR · RAJAYAL Lecturer in Mataomarics Gewern, Kunstonicoham.

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Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9,6,2022.

Place : Kumbakonam Date : 9,6,2022.

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### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON DOMINATION THEORY IN FUZZY GRAPH" is a bonafide record of project work done by R.ISHWARYA, Reg. No: P20MA009 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9.6.2022

Place : Kumbakonam Date : 9 - 6 - 2022

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LLDr.S.ABBAS, M.S., M.Phil.M.B.A. M.C.A., Ph.D., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohidson College Adirempattinam - 614 701

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON PRIME LABELING AND COMMON WEIGHT DECOMPOSITION OF GRAPHS" is a bonafide record of project work done by R.JANSI, Reg. No: P20MA010 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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6. Refkumani THE DEPARTMENT HEAD OF

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001 g

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9, b. 2022

Place : Kumbakonam Date : 9,6,2022

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#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON SQUARE AND CUBE DIFFERENCE LABELING OF SOME GRAPHS" is a bonafide record of project work done by J.JAYASRI, Reg. No: P20MA011 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>9,6,202</u>

Place : Kumbakonam

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# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON NEW APPROACH TO SEPARABILITY AND COMPACTNESS IN SOFT TOPOLOGY" is a bonafide record of project work done by V.KEERTHIKAI LAKSHMI, Reg. No: P20MA012 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SUM DISTANCE AND PRODUCT FUZZY DISTANCE TWO LABELING GRAPH" is a bonafide record of project work done by M.MOHANA, Reg. No: P20MA014 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

10.2.2.21 INTERNAL GUIDE MYRS U. SUDAROLIJ

5- Joffumani

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Place : Kumbakonam Date : 9, 6, 2022

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON TIME TO RECRUITMENT FOR A SINGLE GRADE MANPOWER SYSTEM" is a bonafide record of project work done by S.NIVETHA, Reg. No: P20MA015 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date : 9,6,2022

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### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON CONNECTIVITY IN A FUZZY GRAPH AND ITS COMPLEMENT" is a bonafide record of project work done by S.NIVETHA, Reg. No: P20MA016 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date : 9,6,2002.

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SUPER CUBE ROOT CUBE MEAN LABELING OF GRAPHS" is a bonafide record of project work done by A.PARANIKA, Reg. No: P20MA017 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Mrs. P. LATHA Lectures in Mathema Gic W (A), Kumbakonan

Human HEAD OF THE DEPARTMENT

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9.5202

Place : Kumbakonam Date : 9,6,2022.

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### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SUPER ROOT SQUARE MEAN LABELING OF GRAPH" is a bonafide record of project work done by G.PRAGATHI, Reg. No: P20MA018 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

P. Ltl. INTERNAL GUIDE Mrs. P. Lathe Lectures in Mathematice Gicw (A), Kumbakonam

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Place: Kumbakonam Date: 9,6,2022.

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON LUCKY EDGE NEIGHBORHOOD LABELING OF GRAPHS" is a bonafide record of project work done by V.PRAGATHI, Reg. No: P20MA019 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirement for the award of the degree of MASTER OF MATHEMATICS.

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Place : Kumbakonam Date : 9.6.2012

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDT ON SOFT  $P_C$  – CONNECTED SPACE" is a bonafide record of project work done by M. PRIYA, Reg. No: P20MA020 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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5. Agfleman HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

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Place : Kumbakonam Date : 9,6,2022

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON ALGEBRAIC STRUCTURE OF GENETIC INHERITANCE" is a bonafide record of project work done by R.RAKSHANA, Reg. No: P20MA021 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

G. VENBARAS)

leman

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Place : Kumbakonam Date : 9 .6 . 2022

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Lt.Dr.S.ABBAS, M.Sr. M.Phil. M.B.A. M.C.A. Ph.D., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen Colloge Adirampatinam - 614 701.



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON ODD AND EVEN VERTEX EQUITABLE EVEN LABELING GRAPH" is a bonafide record of project work done by R.RANJITHA, Reg. No: P20MA022 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

P. L INTERNAL GUIDE Mrs. P. Latha Lectures in Matt GICW(A), Kumbakonam

S. Deffeman

HEAD OF THE DEPARTMENT Head, Department of Mathematics Gevernment College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $9.6 \cdot 202.2$ 

Place : Kumbakonam Date : 9,6,2022

S. Porg. 06.2-

EXTERNAL EXAMINER

Lt.Dr.S.ABBAS, M.Sc., M.Phil, M.B.A., M.C.A. Ph.D., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 701

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON A REVIEW ON RECENT DEVELOPMENTS OF NEUTROSOPIC MATRIX THEORY & OPEN PROBLEMS" is a bonafide record of project work done by S. RENUGA DEVI, Reg. No: P20MA023 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

G. VEMBARASI

S. Diffuman HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>G</u>, <u>b</u> <u>2012</u>

Place : Kumbakonam Date : 9,6,2022

5. 10000000

EXTERNAL EXAMINER

LI.Dr.S.ABBAS, M.Sc., M.Phil. M.B.A. M.C.A., Ph.D., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 701.

#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON APPLICATIONS OF LAPLACE AND MOHAND TRANSFORMS" is a bonafide record of project work done by J.SAMEENA RASHMI, Reg. No: P20MA024 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

1C. 1Cpp INTERNAL GUIDE IL. ICARPAGIAM)

S. Poffermani

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakenam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9.62022

Place : Kumbakonam Date : 9, 6, 2022

5. Porzaur

EXTERNAL EXAMINER

LLDr.S.ABBAS, M.Sc. M.Phil. M.B.A.M.C.A.Ph.D., Aussistant Professor P.G.& Research Department of Mathematice Khadir Mohidreen College Adirampatinam - 014 701

# PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON EDGE MAGIC AND PRIME EDGE MAGIC LABELING OF GRAPHS" is a bonafide record of project work done by R.P SANTHINI, Reg. No: P20MA025 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

5. Affermani HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on \_\_\_\_\_\_9.6.2022

Place : Kumbakonam Date : 9,6 · 2022

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Lt.Dr.S.ABBAS, M.S. M.PHILMBA, M.C.A.Ph.D., Assistant Professor P.G.S.Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 701.



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON APPLICATION OF MATRIX AND DETERMINANTS" is a bonafide record of project work done by M.SANTHIYA, Reg. No: P20MA026 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Lupmin Maths Giwia, 10mu

5. Reffuman' HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonemous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on .9.1.6.2022

Place : Kumbakonam Date : 9,6,2022

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LI.Dr.S.ABBAS, MSE & Phil M&A.M.C.A.Ph.D. Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 703.

### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON VIRUS GRAPH AND COVID-19 PANDEMIC APPLICATION OF A GRAPH THEORY" is a bonafide record of project work done by R.SHABNA, Reg. No: P20MA027 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9.6.2022

Place : Kumbakonam Date : 9, 6, 2022

S. Posso EXTERNAL EXAMINER

LI.Dr.S.ABBAS, M.Sc. M.Phil. M.B.A. M.C.A. Ph.D., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 701.

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON APPLICATION OF FUZZY MATRIX THEORY IN MEDICAL DIAGNOSIS" is a bonafide record of project work done by M.SNEKA, Reg. No: P20MA028 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

5 Pojkumani

G. Pofkunan HEAD OF THE DEPART

E DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.j

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9.1. 2022

Place : Kumbakonam Date: 9,6-2012

5. 10009 06.1-EXTERNAL EXAMINER

LUDES ABBAS MAL MPHILMEA, MCA. PED. P.O.& Requestors Department of Multi-sensition Khado Mchussen College Adrempathoen - 614 P01



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON K-PARTITIONED AND BALANCED K-PARTITIONED FUZZY GRAPH" is a bonafide record of project work done by M.SOUNDHARANAYAKI, Reg. No: P20MA029 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE Mrs. P. Latta

Lecturen in Hathematics Grc W(A), Kumbakonan

5. Kattuman' HE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9.6.2022

Place : Kumbakonam Date : 9,6,2022

S. A829 5.04.0 EXTERNAL EXAMINER

LLDI'S ABBAS, u.s. MPNE MEA.MCA.PED, Assistant Professor P.G & Research Department of Mathematics Khadis Mohideen College Adirempatinam - 614 701



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON THEORY OF CONSUMER BEHAVIOUR" is a bonafide record of project work done by N.SWETHA, Reg. No: P20MA030 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

IC . IC PAGIAM) INTERNAL GUIDE K. ICARPAGIAM)

S. Afleman

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomicus) Kumbakonam - 612 001,

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $\underline{9.5.2022}$ .

Place : Kumbakonam Date : 9, 6, 2012

5. 10009.06.2-EXTERNAL EXAMINER

LLDr.S.ABBAS, M.Sc. M.Phil. M.S.A. M.C.A. Ph.D., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 701

### PG AND RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON TYPE-2 FUZZY SOFT TOPOLOGICAL SPACES" is a bonafide record of project work done by G.VARSHA, Reg. No: P20MA031 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

5. Pathuman

HEAD OF THE DEPARTMENT

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9-6-2022

Place : Kumbakonam Date : 9 .6.2022

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LI.Dr.S.ABBAS, M.Sc. M.Phil.M.B.A.M.C.A.PhD., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 701.



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON LABELING ON BULL GRAPH" is a bonafide record of project work done by B.VIDHYABHARATHI, Reg. No: P20MA032 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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HEAD OF THE DEPARTMENT Head, Department of Mathematics Gevernment College for Women (Autonomous) Kumbakonam - 612 001.

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Place : Kumbakonam Date : 9,6,2022

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EXTERNAL EXAMINER

Lt.Dr.S. ABEAS, M.S. M.PhS. M.B.A. M.C.A. Ph.D., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 701



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON MATHEMATICAL MODELLING THROUGH CALCULUS OF VARIATIONS AND DYNAMIC PROGRAMMING" is a bonafide record of project work done by R.VIJAYAVALLI, Reg. No: P20MA033 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $\underline{G}$ ,  $\underline{b}$ , 2022

Place : Kumbakonam Date : 9 . 6. 2022

S. Possa EXTERNAL EXAMINER

LI.Dr.S.ABBAS, M.S. M.Phil. M.B.A.M.C.A.Ph.D., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 701

### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SUPER HARMONIC AND K-SUPER HARMONIC MEAN LABELING OF H-GRAPHS" is a bonafide record of project work done by V.VINOTHINI, Reg. No: P20MA034 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9, 6, 26, 2

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S. Poso,062-EXTERNAL EXAMINER

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#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON CONTRA HARMONIC MEAN LABELLING OF GRAPHS" is a bonafide record of project work done by S.VISHNUPRIYA, Reg. No: P20MA035 at Government College for Women (Autonomous), Kumbakonam during this year 2020-2022 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

As a sahithyabhuat w Lecterre in Mathemaks

5- Paffumon'

HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001,

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 9.6.2022

Place : Kumbakonam Date : 9,6,2022

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LI.Dr.S.ABBAS, M.Sc. M.PHELMBA, M.C.A.Ph.D., Assistant Professor P.G.& Research Department of Mathematics Khadir Mohideen College Adirampattinam - 614 701.
#### **KUMBAKONAM**

**PG & RESEARCH DEPARTMENT OF MATHEMATICS** 



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON S<sub> $\alpha$ </sub>-CONNECTEDNESS AND APPLICATIONS OF  $\alpha$ -OPEN SETS IN TOPOLOGICAL SPACES" is a bonafide record of project work done by M. ABINAYA, Reg. No: P21MA001 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

ACR. Anyul INTERNAL GUIDE Dr. DKR. RPJAJAL

S. Haffuman HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on \_\_\_\_\_.

ROLLER OF

GCW(A)Y

 (1991) N. SARALA, R.S., M.Fell, B.S., Fiel, Read / Associate Professor,
G And Restrict Department Of Males method, ADM College For Warner (Autonomical), Regenetiment - 611 Col

Place: Kumbakonam

Date :

# GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS) KUMBAKONAM

**PG & RESEARCH DEPARTMENT OF MATHEMATICS** 



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "APPLICATIONS OF MATHEMATICS IN SOCIAL AND BIOLOGICAL SCIENCE" is a bonafide record of project work done by S.R. ABINAYA, Reg No: P21MA002 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

26/04/2023 INTERNAL GUIDE

AD OF THE DEPARTMEN lead, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.,

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27.04.2023

Place: Kumbakonam

Date : 27.04 2023



EXTERNAL Dr. (Mrs) N. SARALA, MSc., M.Phil. B.Ed., Phd., Hoad / Associate Professor, PG And Resarch Department Of Mathematics, ADM College For Woman (Autonomous) Nagapatinam - 611 001

# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON QUEUEING THEORY AND ITS APPLICATIONS" is a bonafide record of project work done by M. ABIRAMI, Reg. No: P21MA003 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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2. faffumon 26/4/202) THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous), Kumbakonam - 612 901.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27/04/23

Place: Kumbakonam

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Or (Cra) W. S. M. L.A. M.Sc., M.Phil. B.Ed., Phd., Head (Assecute Professor, PC And Resarch Department Of Mathematics, ACM College For Women (Autonomous), Nagapatimam - 511 (001

# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "CONCEPTS AND RESULTS ON COMPLETE FUZZY METRIC SPACE" is a bonafide record of project work done by M.ANJUGAM, Reg. No: P21MA004 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

1C. 10 p 26/04/2023 INTERNAL GUIDE

G. Pafkemari 26/1 HEAD OF THE DEPARTM

Head, Department of Mathematics Government College for Women (Autonomous) . Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27/04/23

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Dr. (Mrs) N. SARALA M.Sc., M.Phil., B.Ed., Phd., Head / Associate Professor, PG And Resarch Department O. Mathematics, ADM College For Woman (Autonomous), Nagapattinam - 511 001

Place: Kumbakonam

Date: 27/04/23



# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON MATHEMATICAL MODELING OF SHIP STABILITY" is a bonafide record of project work done by S.BARANIKA, Reg. No: P21MA005 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

IC · le pp 26/04/223 INTERNAL GUIDE

. Halleman of HEAD OF THE DEPARTMENT Head, Department of Mathematic Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27/04 /23

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Dr. (Mrs) N. SARALA, M.Sc., M.Fhil., B.Ed., Phd., Head / Associate Professor, PG And Resarch Department Cr. (Jathematics, ADM College For Women (Jutonamous), Napapatinam -6 (1.00)

Place: Kumbakonam

Date : 27/04/23



# GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS) KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON APPLICATION OF GRAPH THEORY IN SOCIAL MEDIA" is a bonafide record of project work done by M. BHOOMA SHAKTHI, Reg No: P21MA006 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

GUIDE

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous)

Kumbakonam - 612 001,

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27/04/2023

Place: KUMBAKONAM



N- W27/4/22 EXTERNAL EXAMINER

Dr. (Mrs) N. SARALA, M.Sc., M.Phil., 8.Ed., Phil. Hand / Associate Professor, PG And Resarch Department Of Mathematics, ADM College For Women (Autonomous), Nagapattinem - 611 001

# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON THE ZERO DIVISOR GRAPH" is a bonafide record of project work done by G.BHUVANESHWARI, Reg No: P21MA007 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

AUR, Ruyul INTERNAL GUIDE Dr. ALR, RAJAYAL

G. Lafteman" HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on\_\_\_\_\_.

Mr. he 27/4 EXTERNAL EXAMINER

PO And Reserve D. Sarting and Profession, PO And Reserve D. Sarting and Internation, ADM College For Women Contendations), Magspatilinese, \$11,001

Place: Kumbakonam

Date :



#### **KUMBAKONAM**

PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON CYCLE SPACE AND BOND SPACE OF AN INFINITE GRAPH" is a bonafide record of project work done by K. BHUVANESHWARI, Reg No: P21MA008 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

104/23 INTERNAL GUIDE

HEAD OF THE DEP

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.1

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27.04.23

Place: Kumbakonam CONTROLLER Date : 27.04.2 CCW(A)K

r.J. 29-14/23 EXTERNAL EXAMINER THIN TEES, Phd. PO And Retarch C caronect Of Mathematics, ADI Govern For Women (Autonomous), Frequentinam - 611.001

# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON STANDARD EIGENVECTORS AND INDICES OF INCLINE MATRICES" is a bonafide record of project work done by M. BHUVANESHWARI, Reg. No: P21MA009 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUI

5 Rofferman 26/4 HEAD OF

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>27.4.23</u>

EXTERNAL EXAMINER

Dr. (Mrs) N. SARCILA area. A mot. B.Ed., Phil. Head / Associate Professory PG And Research Discomment Of Mathematics, ADM Course For Viermen (Autonomous), Necessitivitians - 611 001

Place: Kumbakonam

Date : 27.4.23



# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON SPECTRUM AND ENERGY OF GRAPH" is a bonafide record of project work done by M. DEEPIKA, Reg.No: P21MA011 at Government College for Women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL G

G-Kaffernan 26/4/2023 HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27.4.2.3

ONTROLLER

GCW(A)K

18. hereiler EXTERNAL EXAMINE

Head / Assoc its Pister of

ADM College For Warren (AL anomous)

Nagapattinam - 211 001

PO And Resatch Department O

Place: Kumbakonam

Date: 27.4.23

### KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON ARTIFICIAL FUZZY NEURAL NETWORKS AND HYBRID FUZZY NEURAL NETWORKS" is a bonafide record of project work done by F. FAYZA ZULAIHA, Reg.No: P21MA012 at Government College for Women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF

MATHEMATICS. INTERNAL GUIDE

HEAD OF THE DEPARTMENT

HEAD OF THE DEPARTIVIENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27/04/2023

ROLLER OF

GCWIA

ALA M.Sc., M.Phil, B.Ed., Phil

Par Vomen (Autonome

EXTERNAL EXAMINER

Nagapattinam - 611 001

Place: Kumbakonam

Date: 27/04 2013

### KUMBAKONAM

PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON APPLICATION OF INTERVAL VALUED FUZZY SOFT MATRIX (IVFSM) IN DECISION MAKING PROBLEM" is a bonafide record of project work done by A. KAMALI, Reg.No: P21MA013 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

Shifkuman2t/u/2023 INTERNAL GUIDE

S. Rofferman 26/4 HEAD (

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on \_\_\_\_\_.

BOLLERO

GEWIP

27/6/23 EXTERNAL EXAMINER

Place: KUMBAKONAM

M. C. ROLA, M.S. M. Hur, N.S., Mith, March 1. Socials Protection, And Constant Development of Astronomical Consequences (Marcan (Astronomical)) Neuroscitics, 11 (001

Date:

# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON IDEAL CLOSURE SPACES AND SEMI PRIME IDEAL IN TOPOLOGICAL SPACES" is a bonafide record of project work done by D. KANIMOZHI, Reg. No: P21MA014 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

120/10/23 INTERNAL GUI

5. Afferman 26/4/2023 HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27.042028

Place: Kumbakonam

Date: 27.04. 2023



Dr. (Mars) M. S. alffall, A. M. S. M. Frad, M. Ed., Pad., Hand / A. S. alffall, and S. M. Son, FO And Research Duration (O) Mathematics, ADM College For Namen (Autonomous), Nogenations - 511, 001



#### **KUMBAKONAM**

PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON EDGE COLOURING OF FUZZY GRAPH AND ITS APPLICATIONS" is a bonafide record of project work done by K. KAVIPRIYA, Reg No: P21MA015 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

mar 26/4/2023

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001,

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27, 04, 2023

GCW(A)K

Dr. (Mrs) N. SARALA, M.Sc., M.Phil., B.Sd., Phil. Head / Associate Professor, PG And Reserch Disperiment Of Mathematics, ADM College Par Woman (Autonomous), Neuenattinam - 611 DD1

Place: Kumbakonam

Date: 27. 04. 2022

### KUMBAKONAM

**PG & RESEARCH DEPARTMENT OF MATHEMATICS** 



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "NETWORK TOPOLOGY AND ITS APPLICATIONS" is a bonafide record of project work done by A. KEERTHANA, Reg. No: P21MA016 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

P - 20 26 04 128 INTERNAL GUIDE

S. Reffumari 26/4

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27.04,2023

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M. h. 27/4/2 EXTERNAL EXAMINER

Or. (Mns) N. SARALA, M.sc., M.Fnill, D.Ed., Phil., Head / Associate Professor, PC And Resarch Department Of Mathematics, ADM Cellege For Women (Autonomous), Negapattinam - 611 001

Place: Kumbakonam

Date : 27.04.2023

### **KUMBAKONAM**

## **PG & RESEARCH DEPARTMENT OF MATHEMATICS**



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON RADIO MEAN SQUARE LABELING OF SOME GRAPHS" is a bonafide record of project work done by K. MADHUMITHA, Reg. No: P21MA017 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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INTERNAL GUIDE

5. foffumari 26/6/2023 HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - \$12 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27,04.2023

Dr.(Mrs) N. SARALA, M.S., M.P.M. 6.85, Frd. Head / Associate Professor, PG And Resarch Department Of Mathematics. ADM College For Woman (Autonomous). Neglepatilinam - 611 001

Place:

Date: 27.04.23

### **KUMBAKONAM**

PG & RESEARCH DEPARTMENT OF MATHEMATICS



# BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON APPLICATIONS OF MATHEMATICS IN INDUSTRY" is a bonafide record of project work done by S. MARAGATHAVALLI, Reg No: P21MA018 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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5- Reffunan'2 6/4 202) HEAD OF THE DEPARTMEN

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 991.7

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on \_\_\_\_\_\_.

TROLLERO

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Dr.(Mrs) N. SARALA, M.Sc., M.Phil, B.Ed., Phil, Head / Associate Professor, PG And Resarch Department Of Mathematics, ADM College For Women (Autonomous), Nagapanimam - 611 001

Place: Kumbakonam

Date : 27.04.2023

# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON FUZZY BOOLEAN ALGEBRA WITH APPLICATIONS" is a bonafide record of project work done by A. MOHANAPRIYA, Reg.No: P21MA019 at Government College for Women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Auton 3m July Kumbakonam - 612 001

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $270 \varphi$ . 2023

NTROLLER

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M. L2714/23 EXTERNAL EXAMINER

In (Mar) N., EAPALA, M.S., M.P.O., B.Ed., Phd., Read Assam we Professor. PO Am Reserve Department in Mathematics, Athe Conversion Providement (Autonomous), Neglectives – 611 001



Date: 27.0 4.2022

#### KUMBAKONAM

PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON RHOTRIX THEORY AND ITS APPLICATIONS" is a bonafide record of project work done by P. MOHANASUNDHARI, Reg. No: P21MA020 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

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Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>A7 04 8</u>033

EXTERNAL

Dr. (Mes) H. S. Barra, P. S. H. M. Man, Phil. Hang / Attonueta Propagana PD And Resource Englisher alles, ATTE Output full Woman's (Subwarrants), Incommenting - 211 (01)

Place: Kumbakonam

Date : 27 04 2023

CONTROLLER

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#### KUMBAKONAM

PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON LUCKY EDGE LABELING OF PLANAR GRID AND CORONA GRAPHS" is a bonafide record of project work done by S. NALINAPRIYA, Reg. No: P21MA021 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

26/04/2023

INTERNAL GUIDE

5-Affluman 26/4/2023 HEAD OF THE DEPARTMENT

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Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27 4 23

721420 EXTERNAL EXAMINER

Dr. Mirch N. BARALLA, H. H. J. H. PH., Haad / Associate Fortheram, PO And Rosanth Department DTMathematics, ADM College For Vermin (Automatics), Negapatrinem - 611 001

Place: Kumbakonam

Date: 27.4.23



### **KUMBAKONAM**

PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON DESIGN OF MEASURE OF FUZZY INCLUSION" is a bonafide record of project work done by K.PRIYADHARSHINI, Reg. No: P21MA023 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

2614/2023 INTERNAL GUIDE

6. Aflumarizb/4/2023 HEAD OF THE DEPARTMENT

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27.04, 2023

TROLLERO

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EXTERNAL EX

Dr. Men. N. & ATTULL, R. War, W. Hu, Ball, Ped. Heat of Transmit Partnerse PO And Research Dup, Interference ADM College For Herman (Instancements), Negapariment - 811 CO1

Place: Kumbakonam

Date : 27.04 2098

#### KUMBAKONAM

PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON SOME TYPES OF BILINEAR FORMS IN FINITE DIMENSIONAL VECTOR SPACES" is a bonafide record of project work done by K.PRIYADHARSHINI, Reg. No: P21MA024 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

281412 INTERNAL GUIDE

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001./

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27.00 20 20

ONTROLLER

GCW(A)

Place: Kumbakonam

Date: 2). 0 4. 20

Un (Mrs) N. S. R. Land, and R. Phil. D.Ed., Flid. Hu C And Ranger Laurence of Mathomatics,

EXTERNAL EXAMINE

# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON PROJECTION MATRICES" is a bonafide record of project work done by S.SANKARI, Reg.No: P21MA026 at Government College for Women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

G- Afflumon' HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001

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DECIMINE NO. SALASEA MARK MICH. C. St. Phd.

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PO And Ressu

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27.04 2023

GCW(A)K

Place: Kumbakonam

27.00.2023

Date :

#### KUMBAKONAM

PG & RESEARCH DEPARTMENT OF MATHEMATICS



### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON MINIMAL OPEN SETS ON GENERALIZED TOPOLOGICAL SPACE" is a bonafide record of project work done by M.SANMUGAPRIYA, Reg. No: P21MA027 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

AOR . KN INTERNAL GUIDE ·AKR. RAJAYAL

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autono) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on \_\_\_\_\_.

MATROLLER O

\* GCW(A)K

Place : Kumbakonam

Date :

3 EXTERNAL EXAM

Br.(Mirs) N. SARALA, M.Sc. M.Phil, B.Bd., Ped., Mead / Associate Professor, PD Anit Reserve Department Of Mathematics, ADM Oallege For Women (Autonomous), Negativelinese - 511 001

# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON REFINED AND

**n-REFINED NEUTROSOPHIC MATRICES**" is a bonafide record of project work done by **M.SARMILA Reg.No: P21MA028** at **Government College for Women (Autonomous), Kumbakonam** during this year **2021-2023** in partial fulfilment of the requirements for the award of the degree of **MASTER OF MATHEMATICS.** 

INTERNAL

umanol HEAD OI Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.-

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>27.042</u>023

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Dr. (Mrs) N. BARALA, Misc., MPha., BEd., Pid., Field / Associate Professor. PG And Research Department Of Mathematics, ADM College For Women (Autonomous), Negapittinam - 611.001



Date: 27.04.2023

# GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS) KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON UNIFORM CONVERGENCE IN TOPOLOGY AND ALMOST UNIFORM CONVERGENCE IN TOPOLOGY" is a bonafide record of project work done by K. SUBETHA, Reg. No: P21MA029 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

26 04 23 INTERNAL GUII

S. Kafkuman 26/4/2023

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>27.04</u>.23

Place: KUMBAKONAM

Date: 27.04.2023 GCW(A)K

EXTERNAL EXAMINER

Dr. (Nin) H. Sanada a was along a Fil. Fid. Hand / Law mail Holeston PG And Residen Description (Autonomous), ADM Collings For Viewan (Autonomous), Nagapatisham - 511-001

### **KUMBAKONAM**

## **PG & RESEARCH DEPARTMENT OF MATHEMATICS**



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON ROBOTICS TOPOLOGY AND ITS APPLICATION" is a bonafide record of project work done by P. SUPRAJA, Reg. No: P21MA030 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

P. Letter 26 04/23 INTERNAL GUIDE

5. Reffumari 26/0 HEAD OF THE DEPARTA

Head, Department of Mathematics Government College for Women (Autonemous) Kumbakonam - 612 001

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>27.04</u>.2023.

JJ. h27141 EXTERNAL EXAMINER

Dr. (Mrs) M. S.A. S. J. M. S. Manne, B. St., Pod., Maged FA., enc. etc. 74 and met PG And Resiston Dress, Unsenders, ADM College in The Coll. (2014). Fragment and 11 (21)

Place: KUMBAKONAM

Date: 27-04-2023



# KUMBAKONAM PG & RESEARCH DEPARTMENT OF MATHEMATICS



### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON HYPERGRAPH" is a bonafide record of project work done by R. SWETHA, Reg.No: P21MA031 at Government College for Women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

5. Jeffermani

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on 27.04 28 23

EXTERNAL EXAMINER

Dr. (Mrs) N. SARALA, M.Sc., M.Phil, B.Ed., Phil., Head / Associate Professor, PG and Resarch Department Of Mathematics, ADM College For Women (Autonomous), Nucospattinem - 611 001

Place: Kumbakonam Date: 27.04 2023



#### **KUMBAKONAM**

PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON CODING THEORY AND ITS APPLICATION" is a bonafide record of project work done by B.TAMILARASI, Reg No: P21MA032 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

INTERNAL GUIDE

man 26

HEAD OF THE DEPARTMENT Head, Department of Mathematics Government College for Women (Autonomous). Kumbakonam - 612 001.

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on <u>27.04.</u>2023

NTROLLER

GCW(A)K

EXTERNAL

Dr.(Mrs) N. Statute and Market Prot. B.Ed., Phd., Hend Assertion Protection, PG And Reserve Decomposition and Anamatter, ADM College For Assertion Statutes, Regeneties we set and

Place: Kumbakonam

Date: 27.04.2023

### KUMBAKONAM

#### **PG & RESEARCH DEPARTMENT OF MATHEMATICS**



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON INTUITIONISTIC FUZZY SOFT MATRICES AND ITS APPLICATION OF MEDICAL DIAGNOSIS" is a bonafide record of project work done by M.VAISHNAVI, Reg. No: P21MA033 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

5. Bykeynan 51/4/2023

2- Jeffumon

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.

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TROLLER O

\* GCW(A)K

Nagapatimem -011 001

Mithil, Billd, Phil.

Place: Kumbakonam

Date: 27.04.2023

**KUMBAKONAM** PG & RESEARCH DEPARTMENT OF MATHEMATICS



#### BONAFIDE CERTIFICATE

This is to certify that this project entitled "A STUDY ON DIFFERENCE CORDIAL LABLING OF SOME CYCLE AND SUBDIVISION OF SNAKE RELATED GRAPHS" is a bonafide record of project work done by D.VEERASELVI, Reg. No: P21MA034 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

26 04/2023

INTERNAL GUIDE

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Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001.;

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Place: Kumbakonam

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. M. Sc., M.Phil, B.Ed., Phd., Loctate Professor, And South Department Of Mathematics, For Women (Autonomous),

### **KUMBAKONAM**

**PG & RESEARCH DEPARTMENT OF MATHEMATICS** 



#### **BONAFIDE CERTIFICATE**

This is to certify that this project entitled "A STUDY ON INTERVAL-VALUED FUZZY MATRICES AND ITS APPLICATIONS" is a bonafide record of project work done by B. VINISHA, Reg. No: P21MA035 at Government college for women (Autonomous), Kumbakonam during this year 2021-2023 in partial fulfilment of the requirements for the award of the degree of MASTER OF MATHEMATICS.

euman26/4/2023

5. Afferrariz6/4/2023 HEAL Head, Department of Mathematics

Head, Department of Mathematics Government College for Women (Autonomous) Kumbakonam - 612 001

Submitted for the viva voce examination held at Government College for Women (Autonomous), Kumbakonam on  $27.09 \cdot 2023$ 

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M. L 27(4)23 EXTERNAL EXAMINER

Dr. (Mrs) N., GARALA, H.Sc., M.Phil, B.Ed., Phil. Head (Associate Professor, PC And Results Dispertment Of Mathematics, ACH College For Women (Autonomicus), https://dimen.clif.col

Place: Kumbakonam

Date: 27.04.23