



**ARIGNAR ANNA GOVERNMENT ARTS COLLEGE  
NAMAKKAL – 637 002**

(Re-Accredited with 'B' Grade by NAAC & Affiliated to Periyar University, Salem)

**CRITERION I**

**1. CURRICULAR ASPECTS**

**1.3 CURRICULUM ENRICHMENT**

**1.3.2 Number of students undertaking  
project work/field work/internship**

**2019-2020**

## நெறியாளர் சான்றிதழ்

முனைவர் மு.நடராஜன்  
உதவிப் பேராசிரியர்  
தமிழ்த்துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.

“நாமக்கல் கவிஞரின் அவளும் அவனும் காப்பியத்தில் உலமைகள்” என்னும் தலைப்பில் ர.தீபா இக்கல்லூரியின் தமிழ்த்துறையில் 2019-2020 ஆம் கல்வியாண்டில் முதுகலைப் (எம்.ஏ தமிழ்) பட்டத்தின் ஒரு பகுதியாக அளிக்கும் இவ்வாய்வேட்டை என்னுடைய மேற்பார்வையில் செய்தளித்துள்ளார். இவர் ஆய்வில் குறிப்பிட்டுள்ள முடிவுகள் இவருடைய தனித்த முயற்சியினால் மேற்கொள்ளப்பட்டவை எனச் சான்றளிக்கிறேன்.

  
தமிழ்த்துறைத் தலைவர்

(முனைவர்.மு.நடராஜன்)  
முனைவர் மு. நடராஜன்  
தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.  
இடம் : நாமக்கல்  
நாள் :

  
நெறியாளர் கையொப்பம்

(முனைவர்.மு.நடராஜன்)  
முனைவர் மு. நடராஜன்  
தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.

## நெறியாளர் சான்றிதழ்

முனைவர் சு. அன்பரசன் எம்.ஏ., எம்.எட்., எம்.ஃபில்., பி.எச்.டி.,  
தமிழ் உதவிப்பேராசிரியர்

அறிஞர் அண்ணா அரசு கலைக்கல்லூரி

நாமக்கல் - 637 002.

"சேந்தமங்கலம் அருள்மிகு சௌந்தரவல்லி சமேத சோமேஸ்வரர் திருக்கோயில் வரலாறும் வழிபாடும்" என்னும் தலைப்பில் முதுகலைத் தமிழ் (எம்.ஏ) பட்டத்தின் பகுதி நிறைவாக அளிக்கப்பெறும் இவ்வாய்வேடு நாமக்கல் அறிஞர் அண்ணா அரசு கலைக்கல்லூரித் தமிழ்த்துறையில் 2018 - 2020 ஆம் கல்வியாண்டில் பயிலும் மாணவி வி.கௌசல்யா அவர்களின் சொந்த முயற்சியால் உருவானது என்றும் இதற்கு முன் வேறு எந்த ஆராய்ச்சிக்கும் இவ்வாய்வேடு அளிக்கப் பெறவில்லை என்றும் சான்றளிக்கிறேன்.

  
தமிழ்த்துறைத் தலைவர்  
முனைவர் மு. நடராஜன்  
தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002

இடம் : நாமக்கல்

நாள் : 16-03-2020

  
16.3.2020  
நெறியாளர் கையொப்பம்  
முனைவர். சு. அன்பரசன்,  
உதவிப் பேராசிரியர்  
தமிழ்த்துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.

## நெறியாளர் சான்றிதழ்

முனைவர் அ.சின்னதுரை எம்.ஏ., எம்ஃபில்., பி.எச்.டி.,  
தமிழ் உதவிப் பேராசிரியர்  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.

"தொல்காப்பியத்தில் எண்கள்" என்ற தலைப்பில் அமைந்த செ.மஞ்சு  
(18PTA1105) அவர்களால் அறிஞர் அண்ணா அரசு கலைக்கல்லூரித் தமிழ்த்துறையில்  
2019-2020ஆம் கல்வியாண்டில் என் மேற்பார்வையில் முதுகலைத்தமிழ் (MA)  
பட்டத்திற்காக அளிக்கப்படும் இவ்வாய்வேடு அவரின் முயற்சியால் உருவானது என்றும்  
இதற்குமுன் இத்திட்டக் கட்டுரைக் குறித்து எந்தப் பல்கலைக் கழகத்திலும் எந்த  
ஆய்வாளர்க்கும் எவ்வித ஆராய்ச்சிப் பட்டமும் வழங்கப்படவில்லையெனச்  
சான்றளிக்கிறேன்.

இடம் : நாமக்கல்

நாள் :

  
நெறியாளர் கையொப்பம்

முனைவர் அ. சின்னதுரை  
தமிழ் உதவிப்பேராசிரியர்  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.

  
தமிழ்த்துறைத் தலைவர்  
தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா கலைக்கல்லூரி  
நாமக்கல் - 637 002.

## நெறியாளர் சான்றிதழ்

முனைவர் க.பூபதி MA., M.Phil., Ph.D

தமிழ் உதவிப் பேராசிரியர்

அறிஞர் அண்ணா அரசு கலைக்கல்லூரி

நாமக்கல் - 637 002.

“குறுந்தொகையில் பெண்களின் களவியல் கற்பியல் நிலை” என்னும் தலைப்பில் அமைந்த இந்த ஆய்வேடு முதுகலைப் பட்டம் பெறுவதற்காக எனது மேற்பார்வையில் பொ.மைதிலி (பதிவு எண்.18PTA1106) அவர்களால் உருவானதாகும். இந்த ஆய்வேடு இதற்கு முன் வேறு எந்தப் பட்டத்திற்காகவோ ஆய்வரங்கத்திற்காகவோ அளிக்கப் பெறவில்லை. இவ்வாய்வேடு இவரது சொந்த முயற்சியால் உருவானது என்றும் வேறு எந்த ஆராய்ச்சிக்கும் இவ்வாய்வேடு அளிக்கப்படவில்லை என்றும் சான்றளிக்கிறேன்.



துறைத்தலைவர் கையொப்பம்

தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா கலைக்கல்லூரி  
நாமக்கல் - 637 002

நாமக்கல்

 16.3.20  
நெறியாளர் கையொப்பம்

## நெறியாளர் சான்றிதழ்

முனைவர் மு.நடராஜன் எம்.ஏ., எம்ஃபில், பி.எச்.டி.,  
தமிழ்த்துறை தலைவர், தமிழ்த்துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.

“பாவேந்தரின் பாண்டியன் பரிசில் மெய்ப்பாடுகள்” என்னும் தலைப்பில் முதுகலைத் தமிழ் (எம்.ஏ) பட்டசத்தின் பகுதி நிறைவாக அளிக்கப்பெறும் இவ்வாய்வேடு நாமக்கல் அறிஞர் அண்ணா அரசு கலைக்கல்லூரி தமிழ்த்துறையில் 2019-2020ஆம் கல்வியாண்டில் பயிலும் மாணவி ர.ரஞ்சிதா அவர்களின் சொந்த முயற்சியால் உருவானது என்றும் இதற்கு முன் வேறு எந்த ஆராய்ச்சிக்கும் இவ்வாய்வேடு அளிக்கப் பெறவில்லை எனச் சான்றளிக்கிறேன்.

  
தமிழ்த்துறைத் தலைவர்

முனைவர் மு. நடராஜன்  
தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.

இடம் : நாமக்கல்

நாள் :

  
நெறியாளர் கையொப்பம்  
(முனைவர் மு.நடராஜன்)

முனைவர் மு. நடராஜன்  
தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.

## நெறியாளர் சான்றிதழ்

முனைவர் ச.கார்த்திகேயன், எம்.ஏ., எம்.ஏ., (மொழி) எம்ஃபில், பிஎச்.டி.,

தமிழ் உதவிப் பேராசிரியர்

அறிஞர் அண்ணா அரசு கலைக்கல்லூரி

நாமக்கல் - 637 002.

“கவிஞர் துஷ்யந்த் சரவணராஜின் மழலைக் கவித்திறன்” என்ற தலைப்பில் அமைந்த இவ்வாய்வேடு அரசு கலைக்கல்லூரியில் முதுகலைப்பட்டம் பெறுவதற்காக என் மேற்பார்வையில் ர.சரவணக்குமார் (பதிவு எண்: 18PTA1108) அவர்களால் எழுதப்பெற்றதாகும். இவ்வாய்வேடு இதற்கு முன் வேறு எந்தப் பட்டத்திற்காகவும் அளிக்கப்பெறவில்லை என்றும் இவ்வாய்வேடு இவரது சொந்த முயற்சியால் உருவானது என்றும் சான்றளிக்கிறேன்.

  
நெறியாளர் கையொப்பம்

Dr. S. KARTHIKEYAN M.A., M.A., (Lin) M.Phil., Ph.D.,  
Assistant Professor - Dept. of Tamil  
Arignar Anna Govt. Arts College  
Namakkal - 637 002

இடம் : நாமக்கல்

நாள் : 15/09/2020

  
துறைத் தலைவர் கையொப்பம்  
முனைவர் மு. நடராஜன்  
தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002.

## நெறியாளர் சான்றிதழ்

முனைவர் பி. கந்தசாமி, எம்.ஏ., எம்.பில்., பி.எச்.டி.,  
உதவிப்பேராசிரியர், தமிழ்த்துறை,  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி,  
நாமக்கல் - 637 002.

“தலைமலை சஞ்சீவி பெருமாள் கோயில் வரலாறும் வழிபாடும்” என்னும் தலைப்பில் முதுகலைத் தமிழ் (எம்.ஏ.) பட்டத்தின் பகுதி நிறைவாக அளிக்கப்பெறும் இவ்வாய்வேடு நாமக்கல் அறிஞர் அண்ணா அரசு கலைக்கல்லூரி தமிழ்த்துறையில் 2019 - 2020 ஆம் கல்வியாண்டில் பயிலும் செல்வன் ர.சுரேஷ் அவர்களின் சொந்த முயற்சியால் உருவானது எனவும் இதற்கு முன் வேறு எந்த ஆராய்ச்சிக்கும் இவ்வாய்வேடு அளிக்கப்பெறவில்லை எனச் சான்றளிக்கிறேன்.

  
நெறியாளர்

(முனைவர் பி. கந்தசாமி)

முனைவர் பி. கந்தசாமி, எம்.ஏ., எம்.பில்., பி.எச்.டி.,  
உதவிப்பேராசிரியர், தமிழ்த்துறை,  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி,  
நாமக்கல் - 637 002.  
இடம் : நாமக்கல்

நாள் :

  
தமிழ்த்துறைத்தலைவர்

(முனைவர் மு. ந. சண்முகன்)  
அறிஞர் அண்ணா கலைக்கல்லூரி  
நாமக்கல் - 637 002.



## நெறியாளர் சான்றிதழ்

முனைவர் கா. சந்திரசேகரன், எம்.ஏ., எம்.ஏ., எம்.பி.பி., பி.எச்.டி.,

தமிழ் உதவிப் பேராசிரியர்

அறிஞர் அண்ணா அரசு கலைக்கல்லூரி

நாமக்கல் - 637 002.

"கீழடி ஆய்வுகள் ஒரு பார்வை" என்றும் தலைப்பில் முதுகலைத் தமிழ் (எம்.ஏ) பட்டத்தின் பகுதி நிறைவாக அளிக்கப்பெறும் இவ்வாய்வேடு நாமக்கல் அறிஞர் அண்ணா அரசு கலைக்கல்லூரி தமிழ்த்துறையில் 2018 - 2020 ஆம் கல்வியாண்டில் பயிலும் மாணவன் ச.விஜய் ஆனந்தன் அவர்களின் சொந்த முயற்சியால் உருவானது என்றும் இதற்கு முன் வேறு எந்த ஆராய்ச்சிக்கும் இவ்வாய்வேடு அளிக்கப் பெறவில்லை எனச் சான்றளிக்கிறேன்.



தமிழ்த்துறைத் தலைவர்

தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா கலைக்கல்லூரி  
நாமக்கல் - 637 002.

இடம் : நாமக்கல்

நாள் : 16.09.2020



நெறியாளர் கையொப்பம்  
Dr. K. CHANDRASEKARAN, M.A., M.Phil., Ph.D.,  
ASST. PROFESSOR,  
Dept. of Tamil  
A.A. Govt. Arts College, Namakkal - 637012

## நெறியாளர் சான்றிதழ்

முனைவர் து.இரவிக்குமார், எம்.ஏ. எம்ஃபில், டி.சி.ஏ.சி.ஐ.டி. பி.எச்.டி

உதவிப் பேராசிரியர், தமிழ்த்துறை,


அறிஞர் அண்ணா அரசு கலைக்கல்லூரி

நாமக்கல் - 637 002.

"தமிழாற்றுப்படையின் ஆய்வு முறைகள்" என்ற தலைப்பில் முதுகலைத்தமிழ் (எம்.ஏ) பாடத்தின் பகுதி நிறைவாக அளிக்கப் பெறும் இவ்வாய்வேடு நாமக்கல் அறிஞர் அண்ணா அரசு கலைக்கல்லூரித் தமிழ்த்துறையில் 2019-2020ஆம் கல்வியாண்டில் பயிலும் மாணவர் பெ.விஜயகுமார் அவர்களின் சொந்த முயற்சியால் உருவானது எனவும் இதற்கு முன் வேறு எந்த ஆராய்ச்சிக்கும் இவ்வாய்வேடு அளிக்கப்பெறவில்லை எனவும் சான்றளிக்கிறேன்.

  
தமிழ்த்துறைத் தலைவர்

தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா கலைக்கல்லூரி  
(முனைவர் து.இரவிக்குமார்)

  
நெறியாளர் கையொப்பம்  
முனைவர். து. இரவிக்குமார்  
தமிழ் உதவிப் பேராசிரியர்,  
(அறிஞர் அண்ணா அரசு கலைக்கல்லூரி,  
நாமக்கல் - 637 002)

இடம் : நாமக்கல்


நாள் :

## நெறியாளர் சான்றிதழ்

முனைவர் பி.இன்னமுது, எம்.,ஏ.,எம்.பில்.,பி.எச்.டி.,  
உதவிப் பேராசிரியர்,  
தமிழ்த்துறை,  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி,  
நாமக்கல் - 637002.

"மதுரைக்காஞ்சியில் காஞ்சி" என்னும் தலைப்பில் ஆய்வாளர் சு.வித்யா (பதிவு எண்: 18PTA1113) அவர்களால் அளிக்கப்பெற்றுள்ள இந்த ஆய்வேடு பெரியார் பல்லைக்கழகத் தமிழ் முதுகலைப் பட்டப்பேற்றிற்காக 2019-2020 - ஆம் கல்வி ஆண்டில் அறிஞர் அண்ணா அரசு கலைக்கல்லூரித் தமிழ்த்துறையில் ஆய்வாளரின் சொந்த முயற்சியால் உருவாக்கப்பட்டது. இவ்வாய்வேடு வேறு எந்தப் பட்டப்பேற்றிற்காகவும் எந்தப் பல்கலைக்கழகத்திற்கும் வழங்கப் பெறவில்லை என்று சான்றளிக்கிறேன்.

  
துறைத்தலைவர். 16/3/20  
தமிழ்த்துறைத் தலைவர்  
அறிஞர் அண்ணா கலைக்கல்லூரி  
நாமக்கல் - 637 002.

  
நெறியாளர் 16/3/20  
முனைவர் பி. இன்னமுது  
உதவிப் பேராசிரியர்,  
தமிழ்த்துறை.  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி,  
(முனைவர் பி.இன்னமுது)  
நாமக்கல்-637 002.

இடம்: நாமக்கல்

நாள்: 16.03.2020

**Dr M. MADHAVAN, Ph.D.,**  
Assistant Professor of Economics  
PG & Research Department of Economics  
Arignar Anna Government Arts College  
Namakkal – 637 002


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**CERTIFICATE**

This is certify that the Dissertation entitled “A STUDY ON GROWTH AND DEVELOPMENT OF TEXTILE INDUSTRY IN TAMILNADU, DURING 2000-01 TO 2016-17” submitted to the Periyar University, in partial fulfilment of the requirement for the award of **MASTER OF ARTS IN ECONOMICS**, is a record of original research work done by **G. GAYATHIRI (18PEC1006)** during the period (2018-2020) of his study in the PG & Research Department of Economics at Arignar Anna Government Arts College, Namakkal, under my supervision guidance and the dissertation has not formed the basis for the award of any Other Degree / Diploma / Fellowship or any other similar title to any candidate of any University.

  
Signature of the HOD  
துறைத் தலைவர்,  
முதுகலை & பொருளியல் ஆய்வுத்துறை,  
அறிஞர் அண்ணா அரசு கலைக் கல்லூரி,  
நாமக்கல் - 637 002.

Principal

  
Signature of the Guide  
DR. M. MADHAVAN, M.A., M.Phil., Ph.D.  
Assistant Prof. of Economics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002.

## CERTIFICATE

This is to certify that the Project work entitled, “ A STUDY ON PROBLEMS FACED BY WOMEN VEGETABLE VENDORS IN MOHANUR TALUK” is the bonafide research work carried out by **R.MITHRA (Reg. No.18PEC1007)** and submitted to the department of Economics, Arignar Anna Government Arts College in partial fulfillment of the requirements for the award of the Degree of Master of Arts in Economics during the period from 2018 to 2020 under my guidance and this work has not formed the basis for the award of any degree, diploma, associate ship, fellowship, or titles in this or any other University or other similar institutions of higher learning.

LDI OF S. BALAMURU  
STAN.



Signature of the Guide

செ. சிவசுந்தரி  
Signature of HOD

துறைத் தலைவர்,

10/8/20

முதுகலை & பொருளியல் ஆய்வுத்துறை,  
அறிஞர் அண்ணா அரசு கலைக் கல்லூரி,  
நாமக்கல் - 637 002,

External Examiner

## CERTIFICATE

This is to certify that the project work entitled "A STUDY ON SATISFACTION OF BENEFICIARIES OF PUBLIC DISTRIBUTION SYSTEM WITH SPECIAL REFERENCE TO METTUPATTI PANCHAYATH, NAMAKKAL DISTRICT" submitted by **S.RAGAVI** (Reg.No: **18PEC1008** ) for the award of the degree of Master of Arts in Economics is an original research work carried out by her under my supervision and guidance. The project work has not previously formed the basis for the award of any Degree, Diploma, Associateship, Fellowship or other similar title of any other university and is an independent work done by him.

**Signature of the HOD**

  
**Signature of the Guide**

**Principal**

## CERTIFICATE

This is certify that the report entitled "A STUDY ON FARMER'S PERCEPTION TOWARDS COFFEE CULTIVATION WITH SPECIAL REFERENCE TO KOLLI HILLS" is a bonafide work carried out by R.GAYATHRI (Reg. No: 17UBA1428) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work evaluation viva examination held on 16.09.2020

  
INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION TOWARDS GOLDWINNER SUNFLOWER OIL IN NAMAKKAL TOWN" is a bonafide work carried out by N.SURYA (Reg. No: 17UBA1432) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

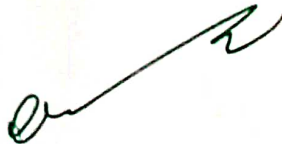


Guide Signature



HOD Signature

Project Work evaluation viva examination held on 16.09.2020



INTERNAL EXAMINER

EXTERNAL EXAMINER



## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION TOWARDS AMUL ICE CREAM IN NAMAKKAL TOWN" is a bonafide work carried out by M.AJITH KUMAR (Reg. No: 17UBA1433) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work evaluation viva examination held on 16.09.2020.


  
INTERNAL EXAMINER

EXTERNAL EXAMINER

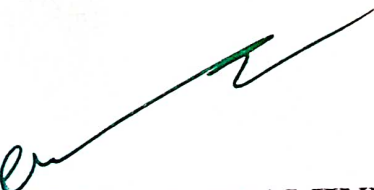
## CERTIFICATION

This to certify that the report entitled “A STUDY ON CUSTOMER SATISFACTION ON DIO SCOOTER WITH SPECIAL REFERENCE TO NAMAKKAL TOWN” is a bonafide work carried out by M.MOHANRAJ (REG.NO:17UBA1434) under my supervision and guidance during the academic year 2019-2020 in the partial fulfilment of the requirements for the award of the **DEGREE OF BACHELOR OF BUSINESS ADMINISTRATION** and the work is an original one and has not formed basis for the award of any degree, diploma, associate ship, fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work Evaluation Viva Examination Held On 16.09.2020

  
INTERNAL EXAMINER

EXTERNAL EXAMINER

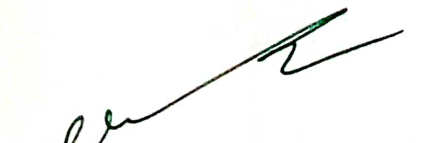
## CERTIFICATE

This is certify that the report entitled "A STUDY ON PUBLIC EXPECTATION TOWARDS PATANJALI PERSONAL CARE PRODUCTS WITH SPECIAL REFERENCE TO NAMAKKAL" is a bonafide work carried out by A.ARULKUMAR (Reg. No: 17UBA1435) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of **Bachelor of Business Administration** and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work evaluation viva examination held on 16.09.2020

  
INTERNAL EXAMINER


EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION TOWARDS AACHI MIXED FRUIT JAM WITH SPECIAL REFERENCE TO NAMAKKAL" is a bonafide work carried out by D.ARUN KUMAR (Reg. No: 17UBA1436) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.




Guide Signature



HOD Signature

Project Work evaluation viva examination held on 16.09.2020.

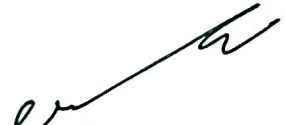


INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION TOWARDS TATA SALT IN NAMAKKAL TOWN" is a bonafide work carried out by S.GOKUL (Reg. No: 17UBA1441) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of **Bachelor of Business Administration** and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work evaluation viva examination held on ..16.09.2020

  
INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER PREFERENCE TOWARDS HOME CARE PRODUCTS OF HUL WITH SPECIAL REFERENCE TO NAMAKKAL TOWN" is a bonafide work carried out by R.INDIRAJITH (Reg. No: 17UBA1443) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.



Guide Signature



HOD Signature

Project Work evaluation viva examination held on 16.09.2020.



INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION TOWARDS UDHAYA KRISHNA GHEE WITH SPECIAL REFERENCE TO NAMAKKAL TOWN" is a bonafide work carried out by D.JEEVANANTHAN (Reg. No: 17UBA1445) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work evaluation viva examination held on 16.09.2020.

  
INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION IN LG TV WITH SPECIAL REFERENCE TO ERODE TOWN" is a bonafide work carried out by S.LINGESH KUMAR (Reg. No: 17UBA1448) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of **Bachelor of Business Administration** and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

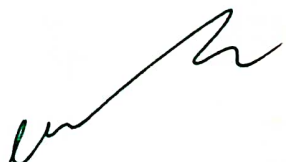


**Guide Signature**



**HOD Signature**

Project Work evaluation viva examination held on 16.09.2020.



**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**



## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER PREFERENCES OF LION DATES IN NAMAKKAL TOWN" is a bonafide work carried out by A.MANOJKUMAR (Reg. No: 17UBA1449) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of **Bachelor of Business Administration** and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.



Guide Signature



HOD Signature

Project Work evaluation viva examination held on ..16.09.2020.

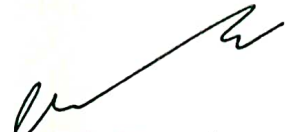


INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATION

This to certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION ON COLGATE WITH SPECIAL REFERENCE TO NAMAKKAL TOWN" is a bonafide work carried out by M.MOHANRAJ (REG.NO:17UBA1450) under my supervision and guidance during the academic year 2019-2020 in the partial fulfilment of the requirements for the award of the DEGREE OF BACHELOR OF BUSINESS ADMINISTRATION and the work is an original one and has not formed basis for the award of any degree, diploma, associate ship, fellowship or any other similar title.



Guide Signature



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Project Work Evaluation Viva Examination Held On 16.09.2020.

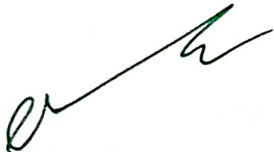


INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER PREFERENCES TOWARDS NARASUS COFFEE IN NAMAKKAL TOWN" is a bonafide work carried out by G.RAMACHANDRAN (Reg. No: 17UBA1457) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.



Guide Signature



HOD Signature

Project Work evaluation viva examination held on ..16.09.2020..



INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION TOWARDS BRAND PREFERENCE OF MOBILE PHONES IN NAMAKKAL TOWN" is a bonafide work carried out by K.RANJITH (Reg. No: 17UBA1458) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

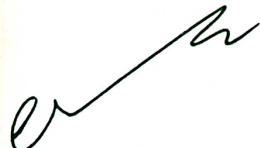


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HOD Signature

Project Work evaluation viva examination held on 16.09.2020



INTERNAL EXAMINER


EXTERNAL EXAMINER

## CERTIFICATE

This to certify that the report entitled " A STUDY ON BRAND PERCEPTION TOWARDS BUSINESS WEBSITE WITH REFERENCE TO NAMAKKAL " is a bonafide work carried out by S. RANJITH (Reg. No: 17UBA1460) under my supervision and guidance during the academic year 2019-2020 in the partial fulfilment of the requirements for the award of the Degree of Bachelor Business Administration and the work in original one and has not formed basis for the award of any degree, diploma, associate ship, fellowship or any other similar title.




Guide Signature



HOD Signature

Project Work evaluation viva examination Held on

16.09.2020 .



INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON PUBLIC AWARENESS TOWARDS LED LIGHTS WITH SPECIAL REFERENCE TO NAMAKKAL TOWN" is a bonafide work carried out by S.SASIKUMAR (Reg. No: 17UBA1463) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of **Bachelor of Business Administration** and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.



Guide Signature



HOD Signature

Project Work evaluation viva examination held on 16.09.2020



INTERNAL EXAMINER

EXTERNAL EXAMINER


## CERTIFICATE

This is certify that the report entitled “A STUDY ON PEPOLE ATTITUDE TOWARDS BSNL NETWORK WITH SPECIAL REFERENCE TO NAMAKKAL” is a bonafide work carried out by E.SEENIVASAN (Reg. No: 17UBA1464) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work evaluation viva examination held on 17.09.2020

  
INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION TOWARDS AASHIRVAAD ATTA IN NAMAKKAL TOWN" is a bonafide work carried out by M.SILAMBARASAN (Reg. No: 17UBA1465) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.



Guide Signature



HOD Signature

Project Work evaluation viva examination held on ...16.09.2020.



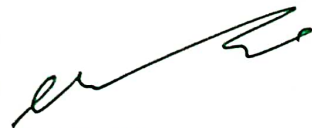
INTERNAL EXAMINER

EXTERNAL EXAMINER



## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION TOWARDS ACER LAPTOP IN NAMAKKAL TOWN" is a bonafide work carried out by M.SUKUMAR (Reg. No: 17UBA1466) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of **Bachelor of Business Administration** and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

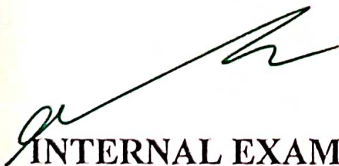


**Guide Signature**



**HOD Signature**

Project Work evaluation viva examination held on .....16.09.2020.



**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**


## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER PREFERENCE IN TWO WHEELERS TOWARDS ROYAL ENFIELD BIKE IN NAMAKKAL TOWN" is a bonafide work carried out by P.SURESH (Reg. No: 17UBA1467) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of **Bachelor of Business Administration** and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work evaluation viva examination held on ..16.09.2020..

  
INTERNAL EXAMINER

EXTERNAL EXAMINER


## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION TOWARDS THE SANKAR CEMENTS IN NAMAKKAL TOWN" is a bonafide work carried out by S.TAMILARASAN (Reg. No: 17UBA1468) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work evaluation viva examination held on 16.09.2020.

  
INTERNAL EXAMINER

EXTERNAL EXAMINER

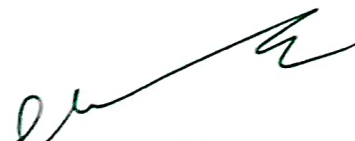
## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION OF REDMI MOBILES IN NAMAKKAL TOWN" is a bonafide work carried out by P.VEERA KUMAR (Reg. No: 17UBA1470) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.

  
Guide Signature

  
HOD Signature

Project Work evaluation viva examination held on ...16:09:2020.

  
INTERNAL EXAMINER


EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION IN SUGAR FREE BISCUITS TOWARDS NUTRI CHOICE IN NAMAKKAL TOWN" is a bonafide work carried out by M.VENKATESWARAN (Reg. No: 17UBA1472) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.



Guide Signature



HOD Signature

Project Work evaluation viva examination held on 16.09.2020




INTERNAL EXAMINER

EXTERNAL EXAMINER

## CERTIFICATE

This is certify that the report entitled "A STUDY ON CUSTOMER SATISFACTION OF RELIANCE JIO NETWORK IN NAMAKKAL TOWN" is a bonafide work carried out by T.VIGNESH (Reg. No: 17UBA1473) under my supervision and guidance during the academic year 2019-2020 in the partial fulfillment of the requirements for the award of the Degree of Bachelor of Business Administration and the work is an original one and has not formed basis for the award of any Degree, Diploma, Associate ship, Fellowship or any other similar title.



Guide Signature



HOD Signature

Project Work evaluation viva examination held on 16.09.2020



INTERNAL EXAMINER

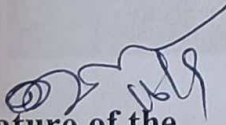
EXTERNAL EXAMINER

## CERTIFICATE

This is to certify that this project report entitled "THE ADOMIAN DECOMPOSITION METHOD FOR SOLVING SECOND ORDER DIFFERENTIAL EQUATIONS" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by M.CHINNASAMY , [Reg.No:18PMA1321] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16/09/20

  
Signature of the

Guide/Supervisor

**Dr. V. SIVAKUMAR,**  
M.Sc., M.Phil., PGDCA., Ph.D.,  
Assistant Professor  
Department of Mathematics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002. Tamilnadu.

Internal Examiner

  
Signature of the

**Head of the Department**  
**J. V. GANESAN,** M.Sc., M.Phil., B.Ed., PGDCA., Ph.D.,  
Assistant Professor & Head,  
UG & Research Department of Mathematics,  
Arignar Anna Government Arts College  
Namakkal-637 002, Tamil Nadu, India

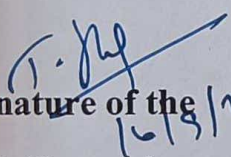
External Examiner

## CERTIFICATE

This is to certify that this project report entitled "A STUDY ON SEPRATION AXIOMS IN TOPOLOGICAL SPACE" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by M.GANESAN, [Reg.No:18PMA1322] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16.09.2020

  
Signature of the  
Guide/Supervisor

  
Internal Examiner

  
Signature of the  
Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.,  
Assistant Professor & Head  
Head of the Department  
'G & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal-637 002, Tamil Nadu, India.

External Examiner

Declaration

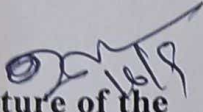


## CERTIFICATE

This is to certify that this project report entitled "A STUDY ON STRONGLY REGULAR FUZZY GRAPH" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by R.JAYAPRAKASH, [Reg.No:18PMA1323] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16/09/2020



Signature of the

Guide/Supervisor

**Dr. V. SIVAKUMAR,**  
M.Sc., M.Phil., PGDCA, Ph.D.,  
Assistant Professor  
Department of Mathematics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002, Tamilnadu.

Internal Examiner



Signature of the

**Head of the Department**  
**Jr. V. GANESAN,** M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.  
Assistant Professor & Head,  
UG & Research Department of Mathematics  
Arignar Anna Government Arts College  
Namakkal - 637 002, Tamil Nadu, India

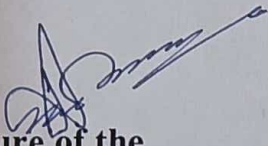
External Examiner

## CERTIFICATE

This is to certify that this project report entitled "A STUDY ON DOMINATION IN FUZZY GRAPH" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by P.KAVINKUMAR, [Reg.No:18PMA1324] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16.09.2020.



Signature of the

**Guide/Supervisor**

**Dr. P. SUNDARARAJAN, Ph.D.,**  
Asst. Professor, PG and Research  
Department of Mathematics  
ARIGNAR ANNA GOVT. ARTS COLLEGE  
NAMAKKAL - 637 002

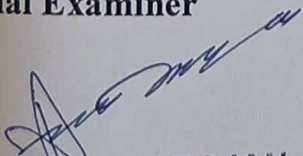


Signature of the

**Head of the Department**

**Jr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.**  
Assistant Professor & Head,  
PG & Research Department of Mathematics,  
Arignar Anna Government Arts College  
Namakkal - 637 002, Tamil Nadu, India

**Internal Examiner**



**Dr. P. SUNDARARAJAN, Ph.D.,**  
Asst. Professor, PG and Research  
Department of Mathematics  
ARIGNAR ANNA GOVT. ARTS COLLEGE  
NAMAKKAL - 637 002

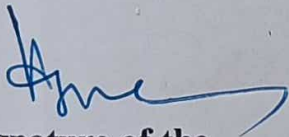
**External Examiner**

## CERTIFICATE

This is to certify that this project report entitled "THE DISTRIBUTION OF GENERALIZED ZEROS OF OSCILLATORY SOLUTIONS FOR SECOND-ORDER NONLINEAR NEUTRAL DELAY DIFFERENCE EQUATIONS" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by **J.LOGANATHAN**, [Reg.No:18PMA1325] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16-09-2020



Signature of the

Guide/Supervisor

Internal Examiner



Signature of the

**Head of the Department**  
**Jr. V. GANESAN**, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.,  
Assistant Professor & Head,  
UG & Research Department of Mathematics  
Arignar Anna Government Arts College  
Namakkal-637 002, Tamil Nadu, India.

External Examiner

## CERTIFICATE

This is to certify that this project report entitled “**OSCILLATION OF FIRST DELAY DIFFERENTIAL EQUATIONS**” submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by “**PERIYAR UNIVERSITY SALEM**” is a record of bonafide research work carried out by **S.PIRUTHIVIRAJAN**, [Reg.No:18PMA1327] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16-09-2020



Signature of the  
Guide/Supervisor



Signature of the

**Head of the Department**  
Jr. V GANESAN, M.Sc., M.A.M., B.Ed., T.D.S., Ph.D.,  
Assistant Professor & Head,  
UG & Research Department of Mathematics,  
Angnar Anna Government Arts College  
Namakkal-637 002, Tamil Nadu, India.

Internal Examiner

External Examiner

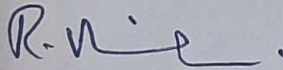
DECLARATION

## CERTIFICATE

This is to certify that this project report entitled "AN INTRODUCTION TO WAVE EQUATION SOLUTIONS AND ITS APPLICATIONS" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by **M.RAMAMOORTHY**, [Reg.No:18PMA1329] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16/09/2020



Signature of the

Guide/Supervisor



Signature of the

Head of the Department,  
Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., P.G.D.A., Ph.D.,  
Assistant Professor & Head,  
-G & Research Department of Mathematics,  
Arignar Anna Government Arts College  
Namakkal - 637 002, Tamil Nadu, India.

Internal Examiner

External Examiner

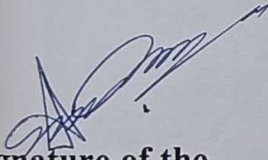
Declaration

## CERTIFICATE

This is to certify that this project report entitled "A STUDY ON MULTI-FUZZY GROUP" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by N.RANJITHKUMAR, [Reg.No:18PMA1330] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

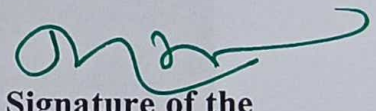
Place: NAMAKKAL.

Date: 16/09/2020



Signature of the

**Guide/Supervisor**  
**Dr. P. SUNDARARAJAN, Ph.D.,**  
Asst. Professor, PG and Research  
Department of Mathematics  
ARIGNAR ANNA GOVT. ARTS COLLEGE  
NAMAKKAL - 637 002

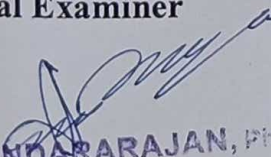


Signature of the

**Head of the Department**  
**Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.,**  
Assistant Professor & Head,  
-G & Research Department of Mathematics.  
Arignar Anna Government Arts College  
Namakkal - 637 002, Tamil Nadu, India.

Internal Examiner

External Examiner



**Dr. P. SUNDARARAJAN, Ph.D.,**  
Asst. Professor, PG and Research  
Department of Mathematics  
ARIGNAR ANNA GOVT. ARTS COLLEGE  
NAMAKKAL - 637 002

Declaration

## CERTIFICATE

This is to certify that this project report entitled "AN INTRODUCTION TO LABELING AND ODD LABELING GRAPH" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by K.SAMARASAM, [Reg.No:18PMA1331] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16-09-2020



Signature of the

Guide/Supervisor



Signature of the

Head of the Department

Jr. V GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.

Assistant Professor & Head,

UG & Research Department of Mathematics

Angnar Anna Government Arts College

Namakkal-637 002, Tamil Nadu, India.

Internal Examiner

External Examiner

Declaration

## CERTIFICATE

This is to certify that this project report entitled "A STUDY ON THE GRAPHOIDAL AND 2-GRAPHOIDAL COVERING NUMBER OF A GRAPH" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by N.SANTHOSH, [Reg.No:18PMA1332] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16/09/2020

Signature of the

Guide/Supervisor

**Dr. V. SIVAKUMAR,**  
M.Sc., M.Phil., PGDCA., Ph.D.,  
Assistant Professor  
Department of Mathematics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002, Tamilnadu.

Internal Examiner

Signature of the

**Head of the Department**  
**Jr V GANESAN,** M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.  
Assistant Professor & Head,  
UG & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal-637 002, Tamil Nadu, India.

External Examiner

Declaration

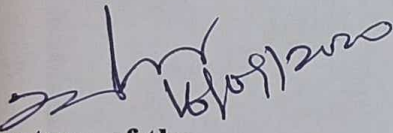


## CERTIFICATE

This is to certify that this project report entitled "A STUDY ON VERTEX-MAGIC GRAPH" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by T.SATHEESH, [Reg.No:18PMA1334] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

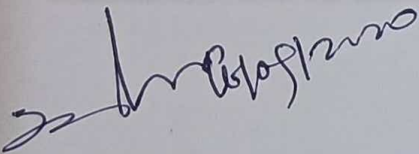
Place: NAMAKKAL.

Date: 16/09/2020

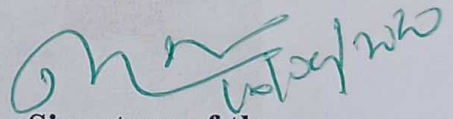


Signature of the

Guide/Supervisor



Internal Examiner



Signature of the

Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.

Assistant Professor & Head

PG & Research Department of Mathematics,

Arignar Anna Government Arts College,

Namakkal - 637 002, Tamil Nadu, India.

External Examiner

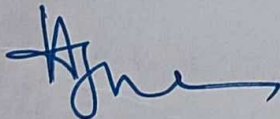
Declaration

## CERTIFICATE

This is to certify that the dissertation entitled "A STUDY ON OSCILLATION CRITERIA OF SECOND ORDER HALF LINEAR DIFFERENTIAL EQUATIONS" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by C.SHIVAANEASUN, [Reg.No:18PMA1335] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16.09.2020



Signature of the  
Guide/Supervisor



Signature of the

**Head of the Department**  
Dr. V GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.,  
Assistant Professor & Head,  
UG & Research Department of Mathematics  
Arignar Anna Government Arts College  
Namakkal-637 002, Tamil Nadu, India.

Internal Examiner

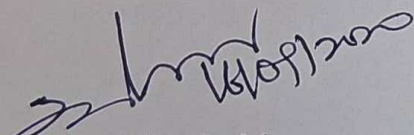
External Examiner

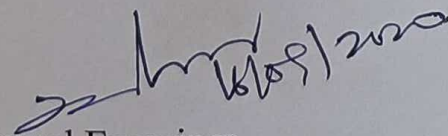
## CERTIFICATE

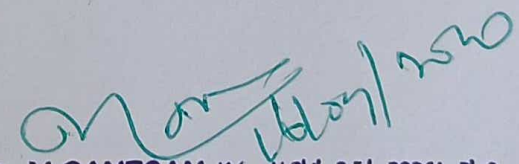
This is to certify that this project report entitled "SOME APPLICATIONS OF DIFFERENTIAL EQUATIONS" submitted to partial fulfillment of the requirements for the award of the degree of Master of Science in Mathematics by "PERIYA UNIVERSITY, SALEM" is a record of bonafide research work carried out by P.THAMARA KANNAN [Reg.No : 18PMA1337] under my guidance and that no part of this project has been submitted for the award of any other Degree / Diploma / Fellowship or other similar title and that the work has not been published in part or full in any magazine / journal.

Place : Namakkal

Date : 16/09/20

  
Signature of the Guide

  
Internal Examiner

  
Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.  
Assistant Professor & Head  
PG & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal - 637 002, Tamil Nadu, India.

External Examiner

## CERTIFICATE

This is to certify that this project report entitled "NUMERICAL SOLUTIONS OF LAMINAR AND TURBULENT NATURAL CONVECTION IN WATER IN RECTANGULAR CHANNELS HEATED AND COOLED ISOTHERMALLY ON THE OPPOSING VERTICAL WALLS" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by M.VELAVAN, [Reg.No:18PMA1338] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16-09-2020

Signature of the

Guide/Supervisor

**Dr. V. SIVAKUMAR,**  
M.Sc., M.Phil., PGDCA., Ph.D.,  
Assistant Professor  
Department of Mathematics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002. Tamilnadu.

Internal Examiner

Signature of the

Head of the Department

**Sr. V GANESAN,** M.Sc., M.Phil., B.Ed., PGDCA., Ph.D.,  
Assistant Professor & Head,  
UG & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal-637 002, Tamil Nadu, India.

External Examiner

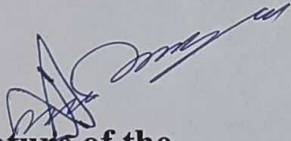
Declaration

## CERTIFICATE

This is to certify that this project report entitled “FUZZY GRAPH THEORY” submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by “PERIYAR UNIVERSITY SALEM” is a record of bonafide research work carried out by **N.DEEPIKA**, [Reg.No:18PMA1339] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

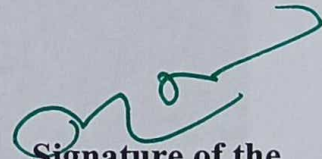
Date: 16-09-2020



Signature of the

**Guide/Supervisor**

**Dr. P. SUNDARARAJAN, Ph.D.,**  
Asst. Professor, PG and Research  
Department of Mathematics  
ARIGNAR ANNA GOVT.ARTS COLLEGE  
NAMAKKAL - 637 002

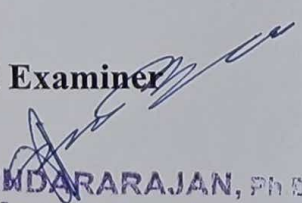


Signature of the

**Head of the Department**

**Jr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGSDA, Ph.D.**  
Assistant Professor & Head,  
PG & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal-637 002, Tamil Nadu, India.

Internal Examiner



**Dr. P. SUNDARARAJAN, Ph.D.,**  
Asst. Professor, PG and Research  
Department of Mathematics  
ARIGNAR ANNA GOVT.ARTS COLLEGE  
NAMAKKAL - 637 002

External Examiner

Declaration

## CERTIFICATE

This is to certify that this project report entitled "A STUDY ON EDGE REGULAR FUZZY GRAPH" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by N.GAAYATHRI, [Reg.No:18PMA1340] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.


Place: NAMAKKAL.

Date: 16.09.2020

  
Signature of the

Guide/Supervisor

  
Internal Examiner

  
Signature of the

Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.

Head of the Department

PG & Research Department of Mathematics,

Arignar Anna Government Arts College,

Namakkal-637 002, Tamil Nadu, India

External Examiner

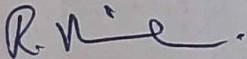
Declaration

## CERTIFICATE

This is to certify that this project report entitled "TOPOLOGICAL GROUPS AND BOUNDED TOPOLOGICAL GROUPS" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by G.GAYATHRI, [Reg.No:18PMA1341] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

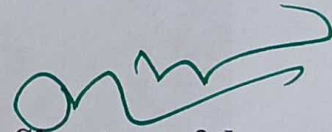
Place: NAMAKKAL.

Date:



Signature of the

Guide/Supervisor



Signature of the

**Head of the Department**  
Jr V GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.,  
Assistant Professor & Head,  
UG & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal-637 002, Tamil Nadu, India.

Internal Examiner

External Examiner

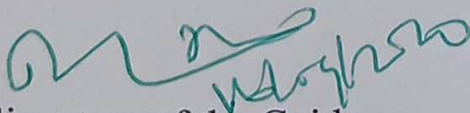
Declaration

## CERTIFICATE


This is to certify that this project report entitled “**OCILLATION OF LINEAR AND NON – LINEAR NEUTRAL DIFFERENTIAL EQUATIONS OF n -TH ORDER**” submitted to partial fulfillment of the requirements for the award of the degree of Master of Science in Mathematics by “**PERIYAR UNIVERSITY, SALEM**” is a record of bonafide research work carried out by **M. NANDHINI**, [Reg.No : 18PMA1342] under my guidance and that no part of this project has been submitted for the award of any other Degree / Diploma / Fellowship or other similar title and that the work has not been published in part or full in any magazine / journal.

Place : Namakkal

Date : 16.09.2020

  
Signature of the Guide

Internal Examiner

  
**Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.**  
Head of the Department  
PG & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal-637 002, Tamil Nadu, India.

External Examiner

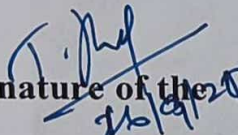


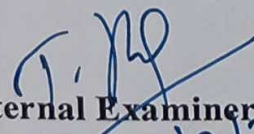
## CERTIFICATE

This is to certify that this project report entitled "A STUDY ON ITERATIVE METHODS FOR SOLVING KLEIN-GORDON EQUATIONS" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by C.PREETHI, [Reg.No:18PMA1343] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16.09.2020

  
Signature of the  
Guide/Supervisor

  
Internal Examiner  
16/9/20

  
Signature of the  
Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.,  
Assistant Professor & Head,  
Head of the Department,  
PG & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal-637 002, Tamil Nadu, India

External Examiner

Declaration

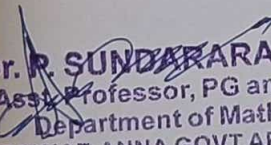
## CERTIFICATE

This is to certify that this project report entitled “**STRONG INTERVAL VALUED NEUTROSOPHIC INTUITIONISTIC FUZZY GRAPH**” submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by “**PERIYAR UNIVERSITY SALEM**” is a record of bonafide research work carried out by **M.PRIYANGA**, [Reg.No:18PMA1344] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

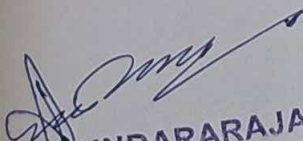
Place: NAMAKKAL.

Date: 16/9/20

Signature of the  
Guide/Supervisor

  
**Dr. P. SUNDARARAJAN, Ph.D.,**  
Asst. Professor, PG and Research  
Department of Mathematics  
ARIGNAR ANNA GOVT. ARTS COLLEGE  
NAMAKKAL - 637 002

Internal Examiner

  
**Dr. P. SUNDARARAJAN, Ph.D.,**  
Asst. Professor, PG and Research  
Department of Mathematics  
ARIGNAR ANNA GOVT. ARTS COLLEGE  
NAMAKKAL - 637 002

  
Signature of the

**Head of the Department**  
**Sr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.,**  
Assistant Professor & Head,  
UG & Research Department of Mathematics,  
Arignar Anna Government Arts College  
Namakkal - 637 002, Tamil Nadu, India

External Examiner

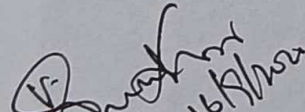
Declaration

## CERTIFICATE

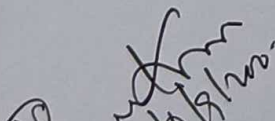
This is to certify that this project report entitled "LOCAL NON-SIMILARITY SOLUTION FOR MHD MIXED CONVECTION FLOW OF A NANOFUID PAST A PERMEABLE VERTICAL PLATE IN THE PRESENCE OF THERMAL RADIATION EFFECTS" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by A.RANJITHA, [Reg.No:18PMA1345] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.


Place: NAMAKKAL.

Date: 16-09-2020

  
Signature of the

Guide/Supervisor

  
Internal Examiner

  
16/9/2020

Signature of the  
Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.,  
Head of the Department  
PG & Research Department of Mathematics,  
Aignar Anna Government Arts College,  
Namakkal-637 002, Tamil Nadu, India.

External Examiner

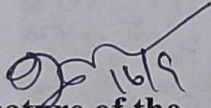
Declaration

## CERTIFICATE

This is to certify that this project report entitled "ANALYSIS OF MAGNETIC FIELD EFFECTS ON DISTRIBUTION HEAT SOURCES IN A NANOFLUID-FILLED ENCLOSURE BY NATURAL CONVECTION" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by V. SARANYA, [Reg.No:18PMA1346] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

Place: NAMAKKAL.

Date: 16.09.2020



Signature of the

Guide/Supervisor

**Dr. V. SIVAKUMAR,**  
M.Sc., M.Phil., PGDCA., Ph.D.,  
Assistant Professor  
Department of Mathematics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002, Tamilnadu.

Internal Examiner



Signature of the

**Head of the Department,**  
Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.  
Assistant Professor & Head,  
PG & Research Department of Mathematics  
Arignar Anna Government Arts College  
Namakkal - 637 002, Tamil Nadu, India

External Examiner

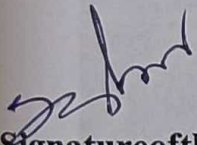
Declaration

## CERTIFICATE

This is to certify that this project report entitled “**THE ROLE OF CONNECTIVITY AND CYCLIC CONNECTIVITY IN FUZZY GRAPH**” submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by “**PERIYAR UNIVERSITY SALEM**” is a record of bonafide research work carried out by **D.SAVITHA**, [Reg.No:18PMA1347] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

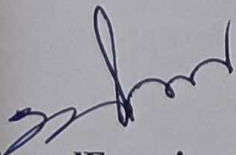
Place: NAMAkkAL.

Date: 16.09.2020



Signature of the

Guide/Supervisor



Internal Examiner



Signature of the

Head of the Department

J. V. GANESAN, M.Sc., M.Phil., B.Ed., P.D.S.A., Ph.D.

Assistant Professor & Head,

UG & Research Department of Mathematics,

Anghar Anna Government Arts College

Namakal-637 002, Tamil Nadu, India

External Examiner

Declaration

## CERTIFICATE

This is to certify that this project report entitled “**HYDRO-MAGNETIC MIXED CONVECTION FLOW IN A LID-DRIVEN CAVITY WITH WAVY BOTTOM SURFACE**” submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by “**PERIYAR UNIVERSITY SALEM**” is a record of bonafide research work carried out by **S.SUGANYA, [Reg.No:18PMA1348]** under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

**Place:** NAMAKKAL.

**Date:** 16.09.2020



**Signature of the**

**Guide/Supervisor**

**Dr. V. SIVAKUMAR,**  
M.Sc., M.Phil., PGDCA., Ph.D.,  
Assistant Professor  
Department of Mathematics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002, Tamilnadu.



**Signature of the**

**Head of the Department**

**Sr. V. GANESAN,** M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.  
Assistant Professor & Head,  
UG & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal - 637 002, Tamil Nadu, India.

**Internal Examiner**

**External Examiner**

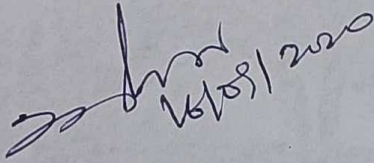
## CERTIFICATE

This is to certify that this project report entitled "A STUDY ON MULTICOLORED FOREST AND TREE IN COMPLETE GRAPH" submitted to partial fulfillment of the requirement for the award of the degree of Master of Science in Mathematics by "PERIYAR UNIVERSITY SALEM" is a record of bonafide research work carried out by **R.VINITHA**, [Reg.No:18PMA1349] under my guidance and that no part of this project report has been submitted for the award of any other Degree/Diploma/Fellowship or other similar title and that the work has not been published in part or full in any magazine/journal.

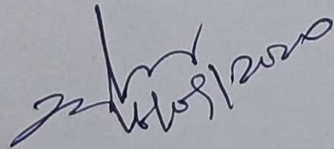
Place: NAMAkkAL.

Date: 16.09.2020

Signature of the  
Guide/Supervisor



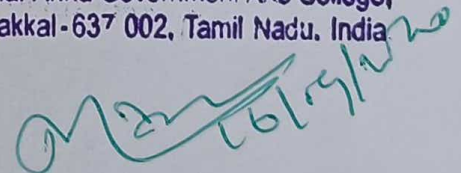
Internal Examiner



Signature of the  
Dr. V. GANESAN, M.Sc., M.Phil., B.Ed., PGDCA, Ph.D.,  
Assistant Professor & Head,  
PG & Research Department of Mathematics,  
Arignar Anna Government Arts College,  
Namakkal-637 002, Tamil Nadu, India



External Examiner



Declaration

ARIGNAR ANNA GOVERNMENT ARTS COLLEGE,

NAMAKKAL-637 002



DEPARTMENT OF PHYSICS


CERTIFICATE

Certified that the dissertation titled "EFFECT OF ANNEALING TEMPERATURE ON SYNTHESIZED BaSO<sub>4</sub> NANOPARTICLES VIA CHEMICAL PRECIPITATION METHOD"

Is a bonafide record of research work done by **S.AJITHKUMAR** with University Register No.18PPH1179 under the supervision of **Dr.R.GOBI**, Assistant Professor, PG and Research Departments of Physics, Arignar Anna Government Arts College, Namakkal and is submitted to the Periyar University, Salem in partial fulfillment of the requirements for the award of the Degree of Master of science in Physics.

  
Head of the Department

தலைவர். ச. பங்காது, என்.என்.சி.எம். பி.எஸ். அண்ணா  
துறைத்தலைவர் (மு) இணைப்பேராசிரியர்  
முது அறிவியல் (மு) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002

  
Signature of the Guide

**Dr. R. GOBI, M.Sc., B.Ed., M.Phil., Ph.D.,**  
Assistant Professor of Physics  
Post Graduate & Research Department  
Arignar Anna Government Arts College  
Namakkal - 637 002, Tamilnadu



**Dr.V.VELUSAMY,M.Sc.,M.Phil.,PGDCA.,Ph.D.,**

Assistant Professor

PG&Research Department of Physics

Arignar Anna Government Arts College,

Namakkal – 637 002



### CERTIFICATE

This is to certify that the thesis entitled “**STUDY ON ELECTROMAGNETIC FIELD RADIATION FROM MOBILE OPERATING TOWERS**” by **Mr. S. BOOPATHI** is a record of project work done by him during the period of his study under my guidance and the thesis has not previously formed the basis for the award of any other degree, diploma, associateship, fellowship or other similar title. This is also certifying that the thesis represents the independent work of the candidate.

**Place:** Namakkal

**Date:** 18.9.2020

**Head of the Department**

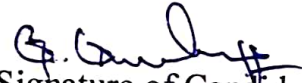
தலைவர், சி. பங்காடு, என்.எஸ்சி.,எம்.பி.டி.பி.டி.  
தலைவர் (ம) இணைப்பேராசிரியர்  
முது அறிவியல் (ம) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002

**Signature of Guide**

**Dr. V. VELUSAMY**  
Assistant Professor  
PG & Research Department of Physics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002, Tamilnadu.

## CERTIFICATE

Certified that the dissertation titled **SYNTHESIS AND CHARACTERIZATION STUDIES ON Ce<sup>3+</sup> DOPED KCl & PURE KCl SINGLE CRYSTALS** is a bonafide record of research work done by **G.GOWTHAMAN** with University Register No.18PPH2283 under the supervision of **Dr.S.BANGARU**, Associate Professor and Head, PG & Research Department, Department of Physics, Arignar Anna Govt. Arts College, Namakkal-2 and Submitted to the Periyar University, Salem-11 in partial fulfillment of the requirements for the award of the Degree of Master of master of science in Physics.

  
Signature of Candidate

  
Signature of Supervisor

தலைவர். ச. பங்காரு, எம்.எஸ்சி.எம். பிலிப்பீன்சுடி  
தலைவர் (ம) இணைப்பேராசிரியர்  
முது அறிவியல் (ம) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002

  
Head of the Department

தலைவர். ச. பங்காரு, எம்.எஸ்சி.எம். பிலிப்பீன்சுடி  
தலைவர் (ம) இணைப்பேராசிரியர்  
முது அறிவியல் (ம) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002

ARIGNAR ANNA GOVERNMENT ARTS COLLEGE,

NAMAKKAL-637 002



DEPARTMENT OF PHYSICS

CERTIFICATE

Certified that the dissertation titled "ACTIVATED CARBON PREPARED FROM COCONUT SHELL AND COMPOSITE WITH MAGANESE DIOXIDE [MnO<sub>2</sub>]" is a bonafide record of research work done by S. KESAVAN with University Register No.18PPH1186 under the supervision of Dr. R. GOBI, Assistant Professor, PG and Research Departments of Physics, Arignar Anna Government Arts College, Namakkal and is submitted to the Periyar University, Salem in partial fulfillment of the requirements for the award of the Degree of Master of science in Physics.

Head of the Department

Signature of the Guide

முனைவர். ச. பங்காடு, எம்.எஸ்சி.,எம்.பீலி,பி.எச.கி.  
தலைமுறைத்தலைவர் (ம) இணைப்பேராசிரியர்,  
முது அறிவியல் (ம) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002

Dr. R. GOBI, M.Sc.,B.Ed.,M.Phil.,Ph.D.,  
Assistant Professor of Physics  
Post Graduate & Research Department  
Arignar Anna Government Arts College  
Namakkal -637 002, Tamilnadu.

**Dr. V. VELUSAMY, M.Sc., M. Phil., PGDCA., Ph.D.**  
Assistant Professor

PG&Research Department of Physics  
Arignar Anna Government Arts College,  
Namakkal – 637 002




### CERTIFICATE

This is to certify that the thesis entitled “**STUDY ON ELECTROMAGNETIC FIELD RADIATION FROM DIFFERENT MOBILE HANDSETS IN VARIOUS OPERATING CONDITIONS**” by **Mr. R. LOGESHWARAN** is a record of project work done by him during the period of his study under my guidance and the thesis has not previously formed the basis for the award of any other degree, diploma, associateship, fellowship or other similar title.

This is also certifying that the thesis represents the independent work of the candidate.

**Place:** Namakkal

**Date:** 18.9.2020

  
Head of the Department  
முதுகுறிஞ்சிவேலி (மு) இணைப்பேராசிரியர்.  
முது அறிவியல் (மு) ஆராய்ச்சி  
இயக்குநர் அலுவலகம்  
சுலைக்கல்லூரி  
அறிஞர் அண்ணா  
நாமக்கல் - 637 002

  
Signature of Guide

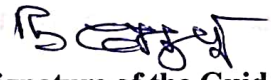
**Dr. V. VELUSAMY**  
Assistant Professor  
PG & Research Department of Physics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002, Tamilnadu.

## CERTIFICATE

Certified that the dissertation titled "THERMAL ANALYSIS OF COPPER, ALUMINIUM, AND BRASS COLLECTORS USING TEMPERATURE SENSORS FOR SOLAR WATER HEATING APPLICATION" is a bonafide record of research work done by S.PAVITHRAN with University Register No.18PPH1191 under the supervision of Dr. N.SETHUPATHI Assistant Professor, PG and Research Departments of Physics, Arignar Anna Government Arts College, Namakkal and is submitted to the Periyar University, Salem in partial fulfillment of the requirements for the award of the Degree of Master of Science in Physics.

  
Head of the Department

தலைவர். ச. பங்காடு. என்.எஸ்சி.எம். பி.எ.டி  
தலைவர் (மு) இணைப்பேராசிரியர்  
முது அறிவியல் (மு) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002

  
Signature of the Guide

Dr. N. SETHUPATHI, M.Sc., M.Phil., Ph.D.,  
Assistant Professor of Physics,  
Post Graduate & Research Department,  
Arignar Anna Government Arts College,  
Namakkal - 637 002, Tamil Nadu.

ARIGNAR ANNA GOVERNMENT ARTS COLLEGE

NAMAKKAL - 637 002



DEPARTMENT OF PHYSICS

CERTIFICATE

Certified that the dissertation titled "SPECTROSCOPIC AND NON SPECTROSCOPIC ANALYSIS OF Fe DOPED BaSO<sub>4</sub> NANOPARTICLES" is a bonafide record of research work done by D.VASANTHARAGAVAN with University Register No. 18PPH1195 under the supervision of Dr. R. GOBI, Assistant Professor, PG and Research Departments of Physics, Arignar Anna Government Arts College, Namakkal and is submitted to the Periyar University, Salem in partial fulfillment of the requirements for the award of the Degree of Master of science in Physics.

Head of the Department

தலைவர். ச. பங்காடு. என்.எஸ்சி.எம். டி.பி.சி.டி.  
தலைவர் (மு) இணைப்பேராசிரியர்.  
முது அறிவியல் (மு) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002

Signature of the Guide

Dr. R. GOBI, M.Sc., B.Ed., M.Phil., Ph.D.,  
Assistant Professor of Physics  
Post Graduate & Research Department  
Arignar Anna Government Arts College  
Namakkal - 637 002, Tamilnadu.

ARIGNAR ANNA GOVERNMENT ARTS COLLEGE,  
NAMAKKAL - 637 002



DEPARTMENT OF PHYSICS

CERTIFICATE

Certified that the dissertation titled "EFFECT OF Mn CONCENTRATION ON STRUCTURAL, FUNCTIONAL AND MORPHOLOGICAL PROPERTIES IN BaSO<sub>4</sub> NANOPARTICLES" is a bonafide record of research work done by T. VENKATARAMAN with University Register No.18PPH1196 under the supervision of Dr. R. GOBI, Assistant Professor, PG and Research Departments of Physics, Arignar Anna Government Arts College, Namakkal and is submitted to the Periyar University, Salem in partial fulfillment of the requirements for the award of the Degree of Master of science in Physics.

  
Head of the Department

தலைவர். ச. பங்காடு, எம்.எஸ்சி.எம்.பி.ஸி.பி.செ.டி  
தலைவர் (மு) இணைப்பேராசிரியர்  
முது அறிவியல் (மு) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி  
நாமக்கல் - 637 002




Signature of the guide


Dr. R. GOBI, M.Sc., B.Ed., M.Phil., Ph.D.,  
Assistant Professor of Physics  
Post Graduate & Research Department  
Arignar Anna Government Arts College  
Namakkal - 637 002, Tamilnadu

## CERTIFICATE

Certified that the dissertation titled “ **COMPARITIVE STUDIES OF OPTICAL XRD, FTIR, UV, PL ON Ce<sup>3+</sup> DOPED KCL & Ce<sup>3+</sup> CODOPED Tb<sup>3+</sup> KCl SINGLE CRYSTALS**” is a bonafide record of research work done by **M.DEVAGI** with University Register No.18PPH1197 under the supervision of **Dr. S.BANGARU, M.SC., M.Phil., Ph.D.,** Associate Professor & Head, PG and Research Departments of Physics, Arignar Anna Government Arts College, Namakkal and is submitted to the Periyar University, Salem in partial fulfillment of the requirements for the award of the Degree of Master of science in Physics.

Signature of the Candidate

  
Signature of the supervisor  
முதுமறைத்தலைவர் (ம) இணைப்பேராசிரியர்  
முது அறிவியல் (ம) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி,  
நாமக்கல் - 637 002

  
Head of the Department  
முதுமறைவர். சா. பங்காடு, எம்.எஸ்சி.,எம்.பி.எசு.டி  
முதுமறைத்தலைவர் (ம) இணைப்பேராசிரியர்  
முது அறிவியல் (ம) ஆராய்ச்சி  
இயற்பியல் துறை  
அறிஞர் அண்ணா அரசு கலைக்கல்லூரி,  
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# ARIGNAR ANNA GOVERNMENT ARTS COLLEGE

NAMAKKAL - 637 002



## CERTIFICATE

Certified that the dissertation titled **“ULTRASONIC STUDY ON TERNARY SYSTEM OF WATER + GLUCOSE + SUGAR FREE NATURA AT 303 K ”** is a bonafied record of research work done by **M. SANGAVI** with University Register No. **18PPH1204** under the supervision of **Dr. V. VELUSAMY**, Assistant Professor, PG and Research Departments of Physics, Arignar Anna Government Arts College, Namakkal and is submitted to the Periyar University, Salem in partial fulfillment of the requirements for the award of the Degree of Master of science in Physics.

  
Signature of the HOD

**Dr. S. BANGARU**, M.Sc., M.Phil., Ph.D.,  
Associate Professor & Head,  
PG & Research Department of Physics,  
Arignar Anna Govt. Arts College,  
Namakkal-2, Tamil Nadu.

  
Research Guide

**Dr. V. VELUSAMY**  
Assistant Professor  
PG & Research Department of Physics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002, Tamilnadu.


# ARIGNAR ANNA GOVERNMENT ARTS COLLEGE

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## CERTIFICATE

Certified that the dissertation titled "ULTRASONIC STUDY ON TERNARY SYSTEM OF WATER +FRUCTOSE+SUGARFREE NATURA AT 303K" is a bonafied record of research work done by **B.SANTHIYA** with University Register No.18PPH1205 under the supervision of **Dr. V.VELUSAMY**, Assistant Professor, PG and Research Departments of Physics, Arignar Anna Government Arts College, Namakkal and is submitted to the Periyar University, Salem in partial fulfillment of the requirements for the award of the Degree of Master of science in Physics.

  
Signature of the HOD

**Dr. S. BANGARU**, M.Sc., M.Phil., Ph.D.,  
Associate Professor & Head,  
PG & Research Department of Physics,  
Arignar Anna Govt. Arts College,  
Namakkal-2, Tamil Nadu.

  
Research Guide

**Dr. V. VELUSAMY**  
Assistant Professor  
PG & Research Department of Physics  
Arignar Anna Govt. Arts College  
Namakkal - 637 002, Tamilnadu.

## CERTIFICATE

This is to certify that dissertation entitled "Growth and Characterization of L-Tryptophan doped Magnesium Thiourea Chloride single Crystals" submitted to the Periyar University in partial fulfillment of the requirements for the award of the degree of **MASTER OF SCIENCE IN CHEMISTRY** is a record of original work done by G.VIMALA (Register No: 18PCH1232) during the period 2018-2020 of her study in the **PG & Research Department of Chemistry, Arignar Anna Government Arts College, Namakkal, Tamil Nadu 637002**, under my supervision and guidance and the dissertation has not formed the basis for the award of any Degree / Diploma / Fellowship / Associate ship or other similar titles to any candidate of any University.

H. S. J. 17/09/2020  
Signature of the Guide

Head of the Department  
சுரைத் தலைவர்,  
வேதியியல் துறை,  
அ-அ-அரக கலைக் கல்லூரி,  
நாமக்கல் - 637 001.

Place: Namakkal

Date: 17.09.2020

Submitted for the viva - voice examination held on 17-09-2020

EXAMINERS:

1. H. S. J. 17/09/2020
- 2.

## CERTIFICATE

This is to certify that dissertation entitled "SYNTHESIS, DENSITY FUNCTIONAL THEORY STUDY AND IN VITRO ANTIMICROBIAL EVALUATION OF MANNICH BASE DERIVATIVE" submitted to the Periyar University in partial fulfillment of the requirements for the award of the degree of **MASTER OF SCIENCE IN CHEMISTRY** is a record of original work done by R.SANTHOSH (Register No: 18PCH1220) during the period 2018-2020 of his study in the **PG & Research Department of Chemistry, Arignar Anna Government Arts College, Namakkal-637002**, under my supervision and guidance and the dissertation has not formed the basis for the award of any Degree / Diploma / Fellowship / Associate ship or other similar titles to any candidate of any University.

*H. Jany 17/09/2020*  
Signature of the Guide

*17/09/2020*  
Head of the Department

ஆறாத் தலைவர்,  
வேதியியல் துறை,  
அ.அ.அரண்மனைக் கல்லூரி,  
நாமக்கல் - 637 001.

Place: Namakkal

Date: 17. 09. 2020

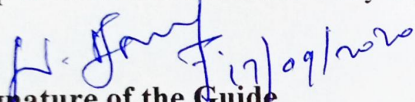
Submitted for the viva - voice examination held on 17. 09. 2020

### EXAMINERS:

1. *H. Jany 17/09/2020*
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## CERTIFICATE

This is to certify that dissertation entitled "Synthesis, Characterization of Transition Metal Complexes of Cu(II), Ni(II) With Schiff Base Ligand" submitted to the Periyar University in partial fulfillment of the requirements for the award of the degree of **MASTER OF SCIENCE IN CHEMISTRY** is a record of original work done by N.Ranjith kumar (Register No: 18PCH1218) during the period 2018-2020 of his study in the **PG & Research Department of Chemistry, Arignar Anna Government Arts College, Namakkal- 637002**, under my supervision and guidance and the dissertation has not formed the basis for the award of any Degree / Diploma / Fellowship / Associateship or other similar titles to any candidate of any University.

  
Signature of the Guide

  
Head of the Department

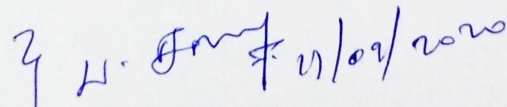
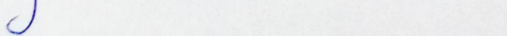
துறைத் தலைவர்,  
வேதியியல் துறை,  
அ.அ.அரசு கலைக் கல்லூரி,  
நாமக்கல் - 637 001.

Place: Namakkal

Date: 17.09.2020

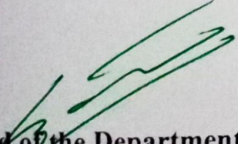
Submitted for the viva - voice examination held on-----17.09.2020

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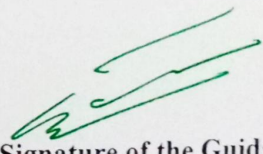
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## CERTIFICATE

This is to certify that dissertation entitled "KINETICS OF OXIDATION OF m-NITRO BENZALDEHYDE BY NICOTINIUM DICHROMATE" submitted to the Periyar University in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE IN CHEMISTRY is a record of original work done by G.VELLIYANGIRI (Register No: 18PCH1223) during the period 2018-2020 of his study in the PG & RESEARCH DEPARTMENT OF CHEMISTRY, ARIGNAR ANNA GOVERNMENT ARTS COLLEGE, NAMAKKAL- 637002, under my supervision and guidance and the dissertation has not formed the basis for the award of any Degree / Diploma / Fellowship / Associate ship or other similar titles to any candidate of any University.

  
Head of the Department

சுவாமிநாத் துரைமுருகன்,  
வேதியியல் துறை,  
அ.அ.அரண்மனை கல்லூரி,  
நாமக்கல் - 637 001.

  
Signature of the Guide

Place: Namakkal

Date:

Submitted for the viva - voice examination held on

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## CERTIFICATE

This is to certify that dissertation entitled "WATER QUALITY ASSESSMENT OF PHYSIO CHEMIO PARAMETERS IN SALEM DISTRICT" submitted to the Periyar University in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE IN CHEMISTRY is a record of original work done by P.NAVEENKUMAR (Register No: 18PCH1216) during the period 2018-2020 of his study in the PG & RESEARCH DEPARTMENT OF CHEMISTRY, ARIGNAR ANNA GOVERNMENT ARTS COLLEGE, NAMAKKAL- 637002, under my supervision and guidance and the dissertation has not formed the basis for the award of any Degree / Diploma / Fellowship / Associate ship or other similar titles to any candidate of any University.

Head of the Department

சுரைத் தலைவர்,  
வேதியியல் துறை,  
அ.அ.அரக கலைக் கல்லூரி  
நாமக்கல் - 637 001.

Signature of the Guide

Place: Namakkal

Date:

Submitted for the viva - voice examination held on

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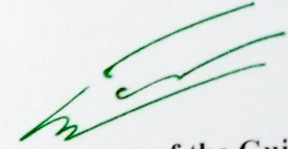
This is to certify that dissertation entitled "OXIDATION OF FURFURAL BY NICOTINIUM DICHROMATE" submitted to the Periyar University in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE IN CHEMISTRY is a record of original work done by M.YOGESWARAN (Register No: 18PCH1224) during the period 2018-2020 of his study in the PG & RESEARCH DEPARTMENT OF CHEMISTRY, ARIGNAR ANNA GOVERNMENT ARTS COLLEGE, NAMAKKAL- 637002, under my supervision and guidance and the dissertation has not formed the basis for the award of any Degree / Diploma / Fellowship / Associate ship or other similar titles to any candidate of any University.

  
Head of the Department

புளையத் தலைவர்,  
வேதியியல் துறை,  
அ.அ.அரண்மனைக் கல்லூரி  
நாமக்கல் - 637 001.

Place: Namakkal

Date:

  
Signature of the Guide

Submitted for the viva - voice examination held on

EXAMINERS:

1.

2.

# CERTIFICATE

This is to certify that the project work dissertation entitled  
“**CHARACTERIZATION OF COCONUT COIR WITH COBALT OXIDE  
COMPOSITE PREPARED BY MICROWAVE TREATMENT**” submitted  
in partial fulfillment of the degree of **MASTER OF SCIENCE IN CHEMISTRY** of  
the **ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL**, is  
bonafied record of the project work carried out by **P.NIRAIMATHI**, Reg No:  
**18PCH1227** under my guidance and supervision and I certify that this work is  
original and has not been submitted else where for any degree.

Head of the Department

**புறநாத் தலைவர்,**  
**வேதியியல் துறை,**  
**அ-ஆ-அரசு கலைக் கல்லூரி**  
**நாமக்கல் - 637 001.**

*P. Niraimathi*  
Signature of the Guide

Submitted for the Viva Voce examination held on:

EXAMINERS:

1)

*P. Niraimathi*  
17/9/2020

2)

## CERTIFICATE

This is to certify that the project work dissertation entitled "MICROWAVE ASSISTED PREPARATION OF BANANA AND HUMAN HAIR WITH COBALT OXIDE COMPOSITE AND ITS CHARACTERIZATION" submitted in partial fulfillment of the degree of MASTER OF SCIENCE IN CHEMISTRY of the ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL, is bonafied record of the project work carried out by K.NARMATHA, Reg No: 17PCH1251 under my guidance and supervision and I certify that this work is original and has not been submitted else where for any degree.

Head of the Department

சுமரத் தலைவர்,  
வேதியியல் துறை,  
அ.அ.அரக கலைக் கல்லூரி,  
நாமக்கல் - 637 001.

*e-mahya*  
Signature of the Guide

Submitted for the Viva Voce examination held on:

EXAMINERS:

1)

*e-mahya*  
17/9/2020

2)

## CERTIFICATE

This is to certify that the project work dissertation entitled “**HUMAN HAIR AND COBALT OXIDE COMPOSITE PREPARED BY MICROWAVE TREATMENT AND ITS CHARACTERIZATION**” submitted in partial fulfillment of the degree of **MASTER OF SCIENCE IN CHEMISTRY** of the **ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL**, is bonafied record of the project work carried out by **A.RAVIKUMAR**, Reg No: **18PCH1219** under my guidance and supervision and I certify that this work is original and has not been submitted else where for any degree.

Head of the Department

16/9/20  
புனைத் தலைவர்,  
வேதியியல் துறை,  
அ.அ. அரண்மனை கலைக்கல்வி,  
நாமக்கல் - 637 001.

Signature of the Guide

Submitted for the Viva Voce examination held on:

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1)

2)

# CERTIFICATE

This is to certify that the project work dissertation entitled  
“CHARACTERIZATION OF BANANA FIBER AND COBALT OXIDE  
COMPOSITE PREPARED USING MICROWAVE METHOD” submitted in  
partial fulfillment of the degree of MASTER OF SCIENCE IN CHEMISTRY of the  
ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL, is bonafied  
record of the project work carried out by K.GOKUL, Reg No: 18PCH1211 under my  
guidance and supervision and I certify that this work is original and has not been submitted  
else where for any degree.

Head of the Department

16/9/2020  
முனைவர் தலைவர்.  
வேதியியல் துறை.  
அ.அ.அரசு கலைக் கல்லூரி.  
நாமக்கல் - 637 001.

e-mahy n  
Signature of the Guide:

Submitted for the Viva Voce examination held on:

EXAMINERS:

1)

e-mahy n  
17/9/2020

2)

## CERTIFICATE

This is to certify that the project work dissertation entitled "FACILE SYNTHESIS OF NANO TITANIA DOPED FUMED SILICA FOR THE COMPLETE MINERALIZATION OF TEXTILE DYE " submitted in partial fulfillment of the degree of MASTER OF SCIENCE IN CHEMISTRY of the ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL, is bonafied record of the project work carried out by T.SUMATHI, Reg No: 18PCH1231 under my guidance and supervision and I certify that this work is original and has not been submitted else where for any degree.

Head of the Department

வேதியியல் துறை,  
அ.அ.அரக கலைக் கல்லூரி,  
நாமக்கல் - 637 061.

Signature of the Guide

Submitted for the Viva Voce examination held on:

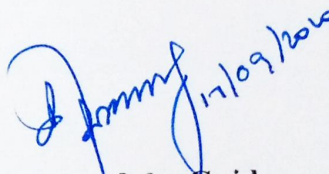
EXAMINERS: 1)

2)

## CERTIFICATE

This is to certify that the project work dissertation entitled "MAGNESIA NANO PARTICLES SYNTHESIS THROUGH SOL-GEL PROCESS AND ITS APPLICATION FOR PHOTOCATALYSIS" submitted in partial fulfillment of the degree of MASTER OF SCIENCE IN CHEMISTRY of the ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL, is bonafied record of the project work carried out by P.PREMA, Reg No: 18PCH1228 under my guidance and supervision and I certify that this work is original and has not been submitted else where for any degree.

Head of the Department

  
Signature of the Guide

Submitted for the Viva Voce examination held on:

EXAMINERS: 1)

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## CERTIFICATE

This is to certify that the project work dissertation entitled "INHIBITING PROPERTIES OF MILD STEEL CORROSION USING PLANT EXTRACT IN IN ACID MEDIUM AT VARIOUS TEMPERATURES" submitted in partial fulfillment of the degree of MASTER OF SCIENCE IN CHEMISTRY of the ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL, is bonafied record of the project work carried out by P.JOTHI, Reg No: 18PCH1226 under my guidance and supervision and I certify that this work is original and has not been submitted else where for any degree.

Head of the Department

சுமந்தி தலைவர்,  
வேதியியல் துறை,  
அ.அ.அ. அரசு கலைக் கல்லூரி,  
நாமக்கல் - 637 001

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ARIGNAR ANNA GOVERNMENT ARTS COLLEGE- NAMAKKAL -2

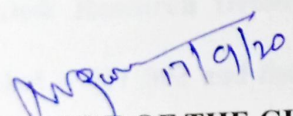
[Affiliated to Periyar University Salem, Govt. of Tamil Nadu]

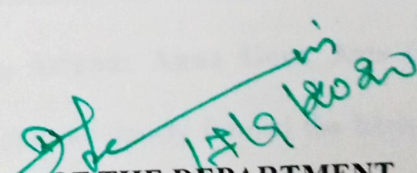
PG & RESEARCH DEPARTMENT OF CHEMISTRY



CERTIFICATE

This is to certify that the dissertation entitled “**Studies on the Removal of Chromium(VI) by Using Nerium Oleander Leaves Activated Carbon**” is a bonafide record of research work done by **Mr. S. JANANI** [Reg. No: 18PCH1225] during 2019 - 2020, submitted to the Periyar University, Salem in partial fulfillment of the requirement for the award of the Degree of **MASTER OF SCIENCE IN CHEMISTRY** and that the dissertation has not previously formed the basis for the award of any other Degree, Diploma, Associate – ship, Fellowship or other title and that the dissertation represents in independent and original work on the part of the candidate under the guidance of **Dr. P. THAMILARASU**, Assistant Professor of Chemistry, PG and Research Department of Chemistry, Arignar Anna Government Arts College, Namakkal -2.

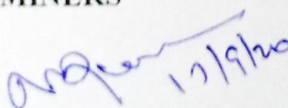
  
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HEAD OF THE DEPARTMENT

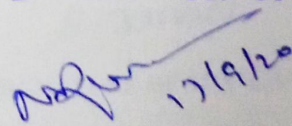
**துறைத் தலைவர்,  
வேதியியல் துறை,  
அ.அ.அரசு கலைக் கல்லூரி,  
நாமக்கல் - 637 001.**

EXAMINERS

1.

  
17/9/20

2.

  
17/9/20

ARIGNAR ANNA GOVERNMENT ARTS COLLEGE- NAMAKKAL -2

[Affiliated to Periyar University Salem, Govt. of Tamil Nadu]

PG & RESEARCH DEPARTMENT OF CHEMISTRY



CERTIFICATE

This is to certify that the dissertation entitled "Studies on the Removal of Impurities Present in Bore Well Water by Using Low Cost Adsorbent" is a bonafide record of research work done by Mr. M.MAYILSAM Y [Reg. No: 18PCH1213] during 2019- 2020, submitted to the Periyar University, Salem in partial fulfillment of the requirement for the award of the Degree of MASTER OF SCIENCE IN CHEMISTRY and that the dissertation has not previously formed the basis for the award of any other Degree, Diploma, Associate – ship, Fellowship or other title and that the dissertation represents in independent and original work on the part of the candidate under the guidance of Dr.P.THAMILARASU, Assistant Professor of Chemistry, PG and Research Department of Chemistry, Arignar Anna Government Arts College, Namakkal -2.

SIGNATURE OF THE GUIDEHEAD OF THE DEPARTMENT

Dr. P. Thamilarasu  
வேதியியல் துறை,  
அ.அ.அரண்மனைக் கல்லூரி  
நாமக்கல் - 637 001

EXAMINERS

1. Dr. P. Thamilarasu

2. Dr. P. Thamilarasu

ARIGNAR ANNA GOVERNMENT ARTS COLLEGE- NAMAKKAL -2

[Affiliated to Periyar University Salem, Govt. of Tamil Nadu]

PG & RESEARCH DEPARTMENT OF CHEMISTRY



CERTIFICATE

This is to certify that the dissertation entitled "**Studies on the Removal of Methyl Red Dye by using PolaylthiaLongifolia Leaves Activated Carbon**" is a bonafide record of research work done by **Mr.A.SEENIVASAN [Reg. No: 18PCH1221]** during 2019- 2020, submitted to the Periyar University, Salem in partial fulfillment of the requirement for the award of the Degree of **MASTER OF SCIENCE IN CHEMISTRY** and that the dissertation has not previously formed the basis for the award of any other Degree, Diploma, Associate – ship, Fellowship or other title and that the dissertation represents in independent and original work on the part of the candidate under the guidance of **Dr.P.THAMILARASU, Assistant Professor of Chemistry, PG and Research Department of Chemistry, Arignar Anna Government Arts College, Namakkal -2.**

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**துறைத் தலைவர்,  
வேதியியல் துறை,  
அ.அ.அரசு கலைக் கல்லூரி,  
நாமக்கல் - 637 001.**

EXAMINERS

1.

2.

## CERTIFICATE

This is to certify that the project work dissertation entitled "EXTRACTION OF NANO SILICA FROM FLY ASH AND ITS CONVERSION AS PHOTOCATALYST FOR THE DEGRADATION OF ACID VIOLET DYE" submitted in partial fulfillment of the degree of MASTER OF SCIENCE IN CHEMISTRY of the ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL, is bonafied record of the project work carried out by S.VINOTHINI, Reg No: 18PCH1233 under my guidance and supervision and I certify that this work is original and has not been submitted else where for any degree.

Head of the Department

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வேதியியல் துறை,  
அ.அ.அரண்மனை கலைக் கல்லூரி  
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Signature of the Guide

Submitted for the Viva Voce examination held on:

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## CERTIFICATE

This is to certify that the project work dissertation entitled "INHIBITION OF MILD STEEL CORROSION IN HYDROCHLORIC ACID SOLUTION BY DATURA PLANT EXTRACT" submitted in partial fulfillment of the degree of MASTER OF SCIENCE IN CHEMISTRY of the ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL, is bonafied record of the project work carried out by J.HARIHARAN, Reg No: 18PCH1212 under my guidance and supervision and I certify that this work is original and has not been submitted else where for any degree.

Head of the Department

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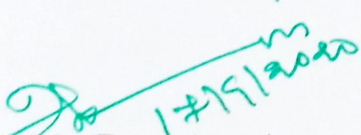
EXAMINERS: 1)

2)

## CERTIFICATE

This is to certify that the project work dissertation entitled "REACTIVE RED 120 DYE DEGRADATION STUDIES USING A NOVEL CATALYST" submitted in partial fulfillment of the degree of MASTER OF SCIENCE IN CHEMISTRY of the ARIGNAR ANNA GOVERNMENT ARTS COLLEGE NAMAKKAL, is bonafied record of the project work carried out by K.MOHANKUMAR, Reg No: 18PCH1214 under my guidance and supervision and I certify that this work is original and has not been submitted else where for any degree.

Head of the Department

  
17/9/2020  
சுமந்த சுவாமி  
வேதியியல் துறை  
அ.அ.அரண்மனை - அரண்  
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EXAMINERS: 1)

2)