



**Maharaja's College, Ernakulam**  
(A Government Autonomous College)  
Kochi - 682 011, Kerala

Affiliated to Mahatma Gandhi University  
Centre of Excellence under Govt. of Kerala  
Identified by UGC as College with Potential for Excellence

Tel : 0484-2352838. Fax : 0484-2363038 Website : [principal@maharajas.ac.in](mailto:principal@maharajas.ac.in)  
[www.maharajas.ac.in](http://www.maharajas.ac.in)

## Declaration

3.7.1

It is hereby certified that the following table provides the number of collaborative activities for research, faculty exchange, and student exchange during the last five years.

2018-19	2017-18	2016-17	2015-16	2014-15
19	17	04	04	02

Principal

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### 3.7.1 Number of Collaborative activities for research, faculty exchange, student exchange per year

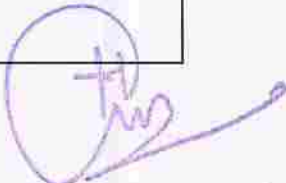
Sl. No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Participant	Source of financial support	Year of collaboration	Duration	Nature of the activity
1	Research project	Dept. of Chemistry, Cochin University of Science & Technology (CUSAT), Kerala	Jiya Jose and Athira A.S, students of M.Sc. Analytical Chemistry	Self Funding	2014-15	1 month	Research
2	Research Project	Hindustan Insecticide td.	Reshma Ambrose, student of M.Sc. Pharmaceutical Chemistry	Self Funding	2014-15	30 days	Research
3	FLAIR Programme	Anglia Ruskin University, UK	Smitha Madanan	UGC	2015-2016	25 days	Range of activities relating to FLAIR
4	International Collaborative Research	IIM, Ahamedabad	Dr Vineeth K M and Neena Merina, Maharajas College	IOM, Kuwait	2015-2016	1 year	District College Coordinatorr
5	Research Project	Integrated Rural Technology Centre (IRTC), Mundur, Palakkad	13 Students of B.Sc. Chemistry - Water Resource and management	Self Funding	2015-16	10 days	Research
6	TED Fellows Retreat	Asilomar Conference Grounds, California	Dr Jijo Pulickiyil Ulahannan (Dept of Physics, maharaja's College)	TED	2015-2016	30/8/2015 - 26/8/2019	Invited Participant at TED Fellows Retreat
7	Project work	FACT, Udyogamandal, Kerala	Inshad V.H. and Sheethal T.H) of B.Sc. Chemistry - Environment and Water management	Self Funding	2016-17	10 days	Research
8	Research Project	Hindustan Insecticide td.	Haritha N.P., student of M.Sc. Pharmaceutical Chemistry	Self Funding	2016-17	90 days	Research



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9	Research Project	Kerala University for Fisheries and ocean Studies (KUFOS), Ernakulam	Elsy K.S., M.Sc. Chemistry student	Self Funding	2016-17	1 month	Research
10	FLAIR Programme	University of Derby, UK	Dr Anna Abraham Pachayil, Dept of Economics	UGC	2016-2017	1 Month	Four Week Flair Internship Programme
11	Summer Research Fellowship	Indian Institute of Science Education and Research (IISER), Thiruvananthapuram	Aswin Kumar Mallya and Sumetha U Shenoy, Students of M.Sc. Chemistry	Self Funding	2017-18	1 month	Research
12	Research Project	Baba Atomic Research Centre, (BARC), Mumbai	2 students (Chinmay Jayraj and Shino Chacko) of M.Sc. Applied Chemistry	Self Funding	2017-18	30 days	Research
13	ASPIRE	St.Joseph's College, Devagiri, Kozhikode.	Fathima Zambakh M.Sc. Botany Student	DCE, Govt of Kerala	2017-18	1Month	PG ASPIRE Research
14	Science Popularisation Programme	ICAR- Central marine Fisheries Research Institute, (CMFRI), Ernakulam, Kerala	Dr. Shyamkumar, Dept. of Botany	KSCSTE	2017-2018	1 year	Know Harmful Algal Blooms-Save life
15	M.Sc. Research Project	Dept. of Applied Chemistry, Cochin University of Science & Technology (CUSAT), Kerala	Aryamol Santhosh, M.Sc. Pharmaceutical Chemistry student	Self Funding	2017-18	1 month	Research
16	M.Sc. Research Project	Dept. of Physics, Cochin University of Science & Technology (CUSAT), Kerala	Nayana George and Greeshma George, M.Sc. Physics Students	Self Funding	2017-18	1 month	Research



  
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17	B.Sc. Project work	KSCSTE- Centre for Water Resource Development and Management (CWRDM), Kozhikode, Kerala	Sreelakshmi M.S., Student of B.Sc. Chemistry - Water Resource and management	Self Funding	2017-18	10 days	Research
18	Science Popularisation Programme	Govt. College, Kottayam, Kerala	Dr. Shyamkumar, Dept. of Botany	KSCSTE	2017-2018	1 year	Know Harmful Algal Blooms-Save life
19	Faculty Exchange	Indian Council for Cultral Relations, Govt. of India, New Delhi	Dr. Liyaqath Ali Khan	Ministry of External Affairs	2017-18	Three years	Director, Moulana Azad Centre for Indian Culture, Cairo, Egypt
20	Internship	Kerala Institute of ocal administration (KILA), thrissur Kerala	21 students of Economics Honours	Self Funding	2017-18	14 days	Local level planning
21	Science Popularisation Programme	Kerala State Council for Science, Technology & environnement, Thiruvananthapuram	Dr. Shyamkumar, Dept. of Botany	KSCSTE	2017-2018	1 year	Know Harmful Algal Blooms-Save life
22	Science Popularisation Programme	Kerala University for Fisheries and ocean Studies (KUFOS)	Dr. Shyamkumar, Dept. of Botany	KSCSTE	2017-2018	1 year	Know Harmful Algal Blooms-Save life
23	ASPIRE	Sree Sankaracharya University of Sanskrit, Kalady	Vani vengopal and Prima, Pradeep, Music students of Sree Sankaracharya University of Sanskrit, Kalady	DCE, Govt of Kerala	2017-18	1month	Research
24	ASPIRE	St. Teresas College, Ernakulam	3 Students (Sanila, Manjusha, Neethu)of M.Sc. Botany	DCE, Govt of Kerala	2017-18	30 days	Research
25	ASPIRE	St. Thomas College, Thrissur	Amrutha, Student of M.Sc. Botany	DCE, Govt of Kerala	2017-18	30 days	Research
26	ASPIRE	St. Peters College, Kollencherry	Savitha, Student of M.Sc. Botany	DCE, Govt of Kerala	2017-18	30 days	Research



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27	ASPIRE	Sree Sankaracharya University of Sanskrit, Kalady	Petreeza Sabu, Music student of Sree Sankaracharya University of Sanskrit, Kalady	DCE, Govt of Kerala	2017-18	1month	Research
28	Internship	FACT, Udyogamandal	22 students of Physics Instrumentation course	Self Funding	2018-19	14 days	On-Job Training programme
29	Internship	FACT, Udyogamandal	14 students of Physics Instrumentation course	Self Funding	2018-19	14 days	On-Job Training programme
30	Local governance	Kerala Institute of Local administration (KILA), thrissur Kerala	27 students of Economics	Self Funding	2018-19	14 days	Local level planning
31	Local governance	Kerala Institute of Local administration (KILA), thrissur Kerala	16 students of Economics Honours	Self Funding	2018-19	14 days	Local level planning
32	Internship	Ministry of statistics & Programme implimentation, Regional office, Kendriya Bhavan, Kozhikode	2 students (Jismy Joy and Angel Cherian) of M.Sc. Statistics	National Sample Survey office (NSSO)	2018-19	2 months	Research
33	Internship	Ministry of statistics & Programme implimentation, Regional office (South), Thiruvananthapuram	1 student of M.Sc. Statistics	National Sample Survey office (NSSO)	2018-19	2 months	Research
34	Internship	The Travancore-Cochin Chemicals Ltd.	2 students (Divya C. R and Dyuthi Sooraj) of Physics Instrumentation course	Self Funding	2018-19	15 days	On-Job Training programme
35	ASPIRE	St. Thomas College, pala	Jilu C John	DCE, Govt of Kerala	2018-19	30 days	Research



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36	ASPIRE	Sree Sankaracharya University of Sanskrit, Kalady	Anju A C, Sanskrit student	DCE, Govt of Kerala	2018-19	4 months	Research
37	ASPIRE	Govt. College for Women, Thiruvananthapuram	2 students (Simi S and Sindhu V J), Hindi Students	DCE, Govt of Kerala	2018-19	1 month	Research
38	Winter School	National Archives of the Netherlands, Hague, Netherlands	Dr Bindu Sharmila T K	National Archives of the Netherlands	2018-19	10 days	Shared Cultural Heritage
39	Twining of Indo-US Foldscope project	Don Bosco College, Maram, Manipur	Dr S Shyamkumar, Dept of Botany	DBT	2018-19	1 year	Foldscope as a tool for harmful algal identification
40	Research project	Calicut University, Malapuram	Akhila P.A. and Ancy P.J, M.Sc. Physics students	Self Funding	2018-19	1 month	Research
41	Research Project	KSCSTE- Centre for Water Resources Development and Management (CWRDM), Kozhikode	8 Students of B.Sc. Chemistry - Water Resource and management	Self Funding	2018-19	30 days	Research
42	M.Sc. Project work	Baba Atomic Research Centre, (BARC), Mumbai	2 students (Chinmay Jayaraj and Shino Chacko) of M.Sc. Applied Chemistry	Self Funding	2018-19	1month	Research
43	ASPIRE	St.Teresa's College, Ernakulam	Neethi C Nair , Ph.D. Student of St. Teresas College, ernakulam	DCE, Govt of Kerala	2018-19	4 months	Research
44	M.Sc. Project work	Dept. of Physics, Cochin University of Science & Technology (CUSAT), Kerala	Greeshma George, M.Sc. Physics student	Self Funding	2018-19	1 month	Research
45	M.Sc. Project work	Dept. of Chemistry, Cochin University of Science & Technology (CUSAT), Kerala	Aryamol Santhosh, M.Sc. Pharmaceutical Chemistry student	Self Funding	2018-19	1 month	Research
46	FLAIR Orientation Programme	COLLEGIATE EDN DEPT	Jeena Mariot Xavier	Govt of Kerala	2018-19	1 day	FLAIR orientation



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**Kerala Institute of Local Administration**  
Mulamkunnathukavu P.O, Thrissur - 680 581

**CERTIFICATE**

Certified that Shri. / Smt ..... *Sreelakshmi.M.S.*.....

.....*Student, BA Economics(Honours), Maharaja's College, Ernakulam*.....

*participated in the training programme on* .....

*Local Governanee Interface (Internship Programme)*  
.....

from ..... *04.01.2019* ..... to ..... *17.01.2019* ..... at KILA



*[Signature]*  
**DIRECTOR**

*[Signature]*  
SENIOR GRADE PRINCIPAL  
MARAJA'S COLLEGE  
ERNAKULAM





**Kerala Institute of Local Administration**  
 Mulamkunnathukavu P.O, Thrissur - 680 581

**CERTIFICATE**

Certified that Shri./ Smt ..... *Tassy Antony* .....

..... *Student, BA Economics(Honours), Mahavejo's College, Eruvakkulam* .....

participated in the training programme on .....

**Local Governance Interface (Internship Programme)**

from **04.01.2019** to **17.01.2019** at KILA



*[Signature]*

**DIRECTOR**



*[Signature]*  
 PRINCIPAL  
 COLLEGE  
 ERUVAKKULAM





VIVEKANANDHA COLLEGE OF  
ARTS AND SCIENCES FOR WOMEN



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SPONSORED BY: ANGAMMAL EDUCATIONAL TRUST.  
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Elayampalayam - 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.  
Phone: 04288 - 234560(7 Lines), FAX: 04288 - 234033.

VIVEKANANDHA  
EDUCATIONAL INSTITUTIONS

Ref.No:040/OTH-FS/2018

Dr.B.T.Sureshkumar, M.Sc., M.Phil., Ph.D.,  
Principal

Date: 20.11.2018

To

Dr.Shyam Kumar,  
Assistant Professor,  
Post Graduate & Research Department of Botany,  
Maharajas College,  
Ernakulum, Kerela.

Dear Dr. Shyam Kumar

Sub.: *Twining of Foldscope project - regarding*

Greetings from Vivekanandha College!

With reference to DBT- Foldscope email dated on 17/06/2018 of Reference No. BT/IN/Indo-US/Foldscope/39/2015 dated on 20/3/2018 for Foldscope project under DBT in connection with twining the project with other Institutions. Hereby, we inform you that Dr.C.Deepika Thenmozhi, Assistant Professor, Department of Biochemistry, Vivekanandha college of Arts and Sciences for Women (Autonomous), Elayampalayam, is interested in twinning the Foldscope project entitled "Diagnosis of bacterial contamination in Currency notes using Foldscope and to create awareness to the society" with You -Dr. Shyam Kumar, Assistant Professor, Post Graduate & Research Department of Botany, Maharajas College, Ernakulum, Kerela, Project entitled " Spot Identification of Harmful/Toxic algae in fresh water and Marine habitats using Foldscope"

Thanking you



*[Signature]*  
Principal

VIVEKANANDHA COLLEGE OF ARTS AND  
SCIENCES FOR WOMEN (Autonomous)  
ELAYAMPALAYAM - 637 205  
TIRUCHENGODE TK, NAMAYKAL DT  
TAMIL NADU



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**VIVEKANANDHA COLLEGE OF  
ARTS AND SCIENCES FOR WOMEN**



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Elayampalayam - 637 205, Tiruchengode, Namakkal DL, Tamil Nadu,  
Phone : 04288 - 234560 (7 Lines), FAX : 04288 - 234033.

VIVEKANANDHA  
EDUCATIONAL INSTITUTIONS

Ref.No:468/VICAS-ATTN-CERT/18-19

Date: 08.02.2019

Dr. B.T.Sureshkumar, M.Sc., M.Phil., Ph.D.,  
Principal


**ATTENDANCE CERTIFICATE**

This is to certify that **Dr.SHYAM KUMAR**, Assistant Professor,  
Department of Botany, Maharajas College, Eranakulam, Kerala, has  
delivered a Guest Lecture on "**Spot Identification of Harmful /  
Toxic Algae in Fresh Water and Marine habitats**" regarding  
Foldscope Twinning Programme in the Department of Biochemistry for  
the academic year 2018-2019 in our College on 08.02.2019.

  
Principal

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VIVEKANANDHA COLLEGE OF ARTS AND  
SCIENCES FOR WOMEN (Autonomous)  
ELAYAMPALAYAM - 637 205  
TIRUCHENGODE T.N. (NAMAKKAL DL)TAMIL NADU



  
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MAHARAJA'S COLLEGE  
ERNAKULAM



# THE TRAVANCORE - COCHIN CHEMICALS LTD.

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ISO 14001 : 2015 CERTIFIED BY IROS



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INDIAN  
NIGMA  
NIGMA

HR/PW/1162/2019

16.05.2019

## CERTIFICATE OF INTERNSHIP

*This is to certify that Ms. Dyuthi Sooraj, a student of B. Sc Physics Instrumentation from Maharaja's College, Kochi - 682 011, has successfully completed an Internship in our company for a period of 15 days from 02.05.2019.*

*We wish all the best for her future.*

  
Shibu S. Dev  
Manager (HR)





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MAHARAJA'S COLLEGE-  
ERNAKULAM





# THE TRAVANCORE - COCHIN CHEMICALS LTD.

(A KERALA GOVERNMENT COMPANY)

P.B. No. 4, UDYOGAMANDAL P.O., KOCHI - 683 501, KERALA.

CIN:U24299KL1951SGC001237



HR/PW/1162/2019

16.05.2019

## CERTIFICATE OF INTERNSHIP

*This is to certify that Ms. Divya C.R, a student of B. Sc Physics Instrumentation from Maharaja's College, Kochi – 682 011, has successfully completed an Internship in our company for a period of 15 days from 02.05.2019.*

*We wish all the best for her future.*



*Shibu S. Dev  
Manager (HR)*



*SPECIAL GRADE PRINCIPAL  
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ERNAKULAM*



*[Handwritten signature]*

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No.

Institution Address

Joining Report  
Sl/101945/19/Coll-06  
Ref. Dated 28/09/2019

As per the reference cited above, MU C JOHN (CHETTIARAMBIL  
HOUSE KURAVILANGAD KOTTAYAM KURAVILANGAD 686222, Kottayam, Kerala) has joined in the Maharaja's  
College with effect from 01/09/2019 for doing Internship of Asstt. Scholarship.



*[Signature]*  
Principal/In-charge of the Institution  
PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM

Date: 01/02/19



No.

Institution Address

**Joining Report**

SI/101846/2018 Coll. Edn Dept, dt 21.01.2019  
Ref: .....Dated.....

As per the reference cited above,.....ANJU.A.C (ALAPPATTU HOUSE, ATTUPURAM, AYROOR, 683579, Ernakulam, Kerala).... has joined in the,....Maharaja's College,....with effect from F.N of 01-02-19 for doing Internship of Aspire Scholarship



*Accepted*  
01/02/19  
Principal/HOD/Address of the Institution  
**PRINCIPAL**  
MAHARAJA'S COLLEGE  
ERNAKULAM

(Office Seal)

Date: 01.02.2019



*Accepted*  
**SPECIAL GRADE PRINCIPAL**  
MAHARAJA'S COLLEGE  
ERNAKULAM





**SREE SANKARACHARYA UNIVERSITY OF SANSKRIT**  
(A Statutory Institution constituted by Government of Kerala)  
(NAAC Accredited with A Grade)  
KALADY, ERNAKULAM, KERALA- 683574  
Phone: 0484-2463380  
**DEPARTMENT OF SANSKRIT GENERAL**

Date: 31-01-2019

No.DS-SG/ASPIRE/SSUS/2019

**RELIEVEING ORDER**

Ref: Request from ANJU A.C. dated 31.01.2019

Sri / Smt. ANJU A.C. Ph.D research scholar of this university has been selected for the ASPIRE Scholarship for the year 2019. Vide the request referred above ANJU A.C has requested to relieved from the Department to undertake Internship/project from MAHARAJAS COLLEGE ERNAKULAM.

After considering the above, ANJU A.C is hereby relieved from the Department w.e.f. 31.01.2019 to undertake the internship/project for a period of 4 months from 01.02.2019 to 31.05.2019 at MAHARAJAS COLLEGE ERNAKULAM. under the guidance of Dr. REMADEVI V ASSISTANT PROFESSOR OF SANSKRIT, MAHARAJAS COLLEGE ERNAKULAM

She is directed to report before the Head of the Institution/ Department where is the internship/project work is planned to undertake and to obtain a joining report at the time of joining and order on completion of the project from the Head of the institution along with attendance statement for the period



Ujjaya Kumari  
in charge  
HOD, Sanskrit General  
SSUS, Kalady

To THE PRINCIPAL  
Copy to MAHARAJAS COLLEGE ERNAKULAM

1. The Head of the Department/ Host Institution
2. PS to Registrar



[Signature]  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM





No.

Institution Address

**MEMO**

Sub: Coll. Edu. Aspire Scholarship-Selected Student-relieving Certificate-reg

S1/101846/2018/Coll. Edn. Dept. 31/01/2019  
Ref: .....Dated.....

You are selected for the Aspire Scholarship for the year 2018-19 based on your application and the Institution selected for doing the Project/Internship (Maharaja's College) you are requested to get relieved from your parent Department/Institution (Sree Sankaracharya University of Sanskrit, Kalady, PO, Ernakulam-683574) within three days of receipt of this Memo/SMS. After joining the host institution, joining report in the prescribed format appended/enclosed should be forwarded to the Director of Collegiate Education within 7 days of joining.

DIRECTOR OF COLLEGIATE EDUCATION

(Sd/-)

Name : ANJU.A.C

Date : 30/01/2019

Copy to: HOD of Parent Institution  
HOD of Host Institution



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ERNAKULAM







National Archives of the Netherlands  
Ministry of Education, Culture and Science


## CERTIFICATE OF COMPLETION

---

**Dr. Bindu Sharmila T.K.**

has successfully completed  
the Winter School "Managing Archives. Challenges and chances for the 21st century archivist"  
organised by and held at the National Archives of the Netherlands from 5 - 14 November 2019

The Hague, the Netherlands  
14 November 2019



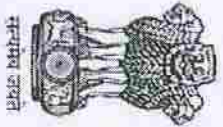
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M.J. ENGELHARD  
NATIONAL ARCHIVIST OF THE NETHERLANDS

---

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HERITAGE**





सत्यमेव जयते

GOVERNMENT OF INDIA

MINISTRY OF STATISTICS & PROGRAMME IMPLEMENTATION

NATIONAL STATISTICAL OFFICE (FIELD OPERATIONS DIVISION)

KERALA (SOUTH) REGION, THIRUVANANTHAPURAM - 695 522

CERTIFICATE

*This is to certify that Kum. NourinJahan student of M.Sc. in Statistics of Dept. of Statistics, Maharaja's College (Autonomous), Ernakulam has successfully completed the Project on 'A Study on the Contribution of Industrial Sector to GDP of India' during the Internship period at NSO(FOD), Regional Office, Thiruvananthapuram.*

Place : Thiruvananthapuram  
Date : 18.07.2019



(SUNITHA BHASKAR)  
DEPUTY DIRECTOR GENERAL

*Sunitha Bhaskar*



*[Signature]*

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MAHARAJA'S COLLEGE  
ERNAKULAM



Data for Development





सत्यमेव जयते



Data for Development

भारत सरकार / Government of India

सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय / Ministry of Statistics & Programme Implementation

राष्ट्रीय सांख्यिकीय कार्यालय ( क्षेत्र संकार्य प्रभाग)

National Statistical Office ( Field Operations Division)

क्षेत्रीय कार्यालय, केरल (दक्षिण) क्षेत्र, तिरुवनंतपुरम - 695 522

Regional Office, Kerala (South) Region, Thiruvananthapuram - 695 522

### प्रमाण पत्र / CERTIFICATE

*This is to certify that Kum. Nourin Jahan student of M.Sc. in Statistics of Dept. of Statistics, Maharaja's College (Autonomous), Ernakulam has successfully completed the Internship on "Field Surveys" during 17.05.2019 to 18.07.2019 at NSO (FOD), Regional Office Thiruvananthapuram.*



*Sunitha*

स्थान / Place : तिरुवनंतपुरम / Thiruvananthapuram

( सुनिता भास्कर / SUNITHA BHASKAR)

तिथि / Date : 18.07.2019

उप महानिदेशक / Deputy Director General



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No.Q-12014/Interns/Kla/N/2019-20

To,

Ms Angel Cherian,  
Maruthikattil House,  
Payyanamon (PO),  
Konni, Pathanamthitta - 689692.

Sub: - Internship Programme for Post-Graduate Student/Research Scholars for 2019-20

Sir,

This has reference to your application for the internship programme offered by the Ministry of Statistics & Programme Implementation for the Year 2019-20. I take this opportunity to inform that you have been selected as an intern for the current year i.e. 2019-20 for the Regional Office at Kozhikode. The objective of the scheme is to familiarize the interns with the Official Statistical system of the country, with specific reference to data collection, processing and analysis, publication & dissemination needs.

You are hereby informed that you will undergo a **two months continuous internship** starting from the date of joining the Regional Office which should not be later than 22.05.2019. You will be required to present a brief report/paper at the end of the Internship period based on your work.

A token scholarship of Rs.5000/-(consolidated) per month would be paid to you on successful completion of your Internship at the end of the Internship period. If during these two months period, any field visit is assigned as a part of the Internship, you will also be paid assistance of Rs.250/ per day subject to a maximum of 10 days. A certificate will also be issued to you on the successful completion of the Internship.

It may be noted that you may have to make your own arrangement for your stay, food etc. during the period of Internship at the station allotted.

You are hereby requested to convey your acceptance for this offer in writing (preferably by return mail) to the undersigned latest by **21.05.2019** along with a self certification indicating that you have not attended any Internship programme of this Ministry earlier and will not attend any such programme from any other Institute/agency during this period.

Yours faithfully,

(Saji George)

Director & Regional Head

Phone-0495 2323455, Fax -0495 2326255 Email : [ro.kzk-fod@nic.in](mailto:ro.kzk-fod@nic.in)



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भारत सरकार  
सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय  
राष्ट्रीय प्रतिदर्श सर्वेक्षण कार्यालय (क्षेत्र संकार्य प्रभाग)  
क्षेत्रीयकार्यालय, केरल (उत्तर)  
ए - ब्लॉक, चौथी मंज़िल, केन्द्रीय भवन,  
कन्नडा पीओ, कोझिकोड 673003



Government of India  
Ministry of Statistics & Programme Implementation  
National Sample Survey Office (Field Operations Division)  
Regional Office, Kerala (North)  
A- Block, Fourth Floor, Kendriya Bhavan,  
Kallai- P.O, Kozhikode-673 003  
Dt: 20.05.2019

No.Q-12014/Interns/Kla/N/2019-20

To,

Ms. Jismy Joy,  
Parippilly (House),  
Sreemoolanagaram (po),  
Aluva, Ernakulam -683580

Sub: - Internship Programme for Post-Graduate Student/Research Scholars for 2019-20

Sir,

This has reference to your application for the internship programme offered by the Ministry of Statistics & Programme Implementation for the Year 2019-20. I take this opportunity to inform that you have been selected as an intern for the current year i.e. 2019-20 for the Regional Office at Kozhikode. The objective of the scheme is to familiarize the interns with the Official Statistical system of the country, with specific reference to data collection, processing and analysis, publication & dissemination needs.

You are hereby informed that you will undergo a **two months continuous internship** starting from the date of joining the Regional Office which should not be later than 22.05.2019. You will be required to present a brief report/paper at the end of the Internship period based on your work.

A token scholarship of Rs.5000/-(consolidated) per month would be paid to you on successful completion of your Internship at the end of the Internship period. If during these two months period, any field visit is assigned as a part of the Internship, you will also be paid assistance of Rs.250/ per day subject to a maximum of 10 days. A certificate will also be issued to you on the successful completion of the Internship.

It may be noted that you may have to make your own arrangement for your stay, food etc. during the period of Internship at the station allotted.

You are hereby requested to convey your acceptance for this offer in writing (preferably by return mail) to the undersigned latest by **21.05.2019** along with a self certification indicating that you have not attended any Internship programme of this Ministry earlier and will not attend any such programme from any other Institute/agency during this period.

Yours faithfully,

(Saji George)

Director & Regional Head

Phone-0495 2323455, Fax -0495 2326255 Email : [ro.lzk-fod@nic.in](mailto:ro.lzk-fod@nic.in)



SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM





Kerala Institute of Local Administration  
Mulamkunnathukavu P.O., Thrissur - 680 581

## CERTIFICATE

Certified that *Shri / Smt* ..... *Vismaya T S* .....

..... *Student, BA Economics (Honours), Maharaja's College, Ernakulam*

*participated in the training programme on* .....

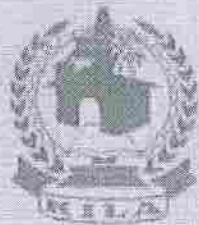
*Local Governance Interface (Internship Programme)*

*from* ..... *04.01.2019* ..... *to* ..... *17.01.2019* ..... *at KILA*



*DE PRINCIPAL*  
*COLLEGE*  
*ERNAKULAM*  
**DIRECTOR**





# Kerala Institute of Local Administration

Mulamkunnathokavu P.O, Thrissur - 680 581

## CERTIFICATE

Certified that Shri. / Smt ..... Thejasree K. P. ....

..... Student, BA Economics (Honours), Maharaja's College, Ernakulam

participated in the training programme on .....

Local Governance Interface (Internship Programme)

from 04.01.2019 to 17.01.2019 at KILA



SPECIAL GRADE PRT (MBA)  
MAHARAJA'S COLLEGE  
ERNAKULAM

*[Signature]*

DIRECTOR



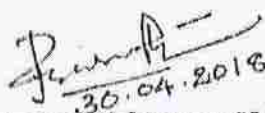
POST GRADUATE AND RESEARCH DEPARTMENT OF CHEMISTRY  
MAHARAJA'S COLLEGE, ERNAKULAM

Certificate

This is to certify that the project report entitled "Investigation of antioxidant properties of Xanthurenic acid and Kynurenic acid", submitted by Chinmay Jayaraj, fourth semester student of MSc Applied Chemistry is a bona fide report of the work carried out at BARC, Mumbai and at Department of Chemistry, Maharaja's College, Ernakulam under my guidance. Also, I endorse that the experimental studies at BARC, Mumbai were conducted under the supervision of Dr. Beena G. Singh.


Place: Ernakulam

Date: 30.04.2018

  
30.04.2018

Dr. Prasanthkumar K P  
Assistant Professor  
Maharaja's College, Ernakulam

D. DR. PRASANTHKUMAR K P  
Assistant Professor of Chemistry  
Maharaja's College, Ernakulam  
Kerala - 682011





SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



INVESTIGATION OF ANTIOXIDANT PROPERTIES OF  
XANTHURENIC ACID AND KYNURENIC ACID

Dissertation Submitted to Mahatma Gandhi University, Kottayam in Partial Fulfilment  
for the Award of Master of Science Degree in Chemistry

by

CHINMAY JAYARAJ

(REG.No.16630001)

MSc APPLIED CHEMISTRY (2016-2018)



POST GRADUATE AND RESEARCH DEPARTMENT OF CHEMISTRY

MAHARAJA'S COLLEGE, ERNAKULAM




SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM

POST GRADUATE AND RESEARCH DEPARTMENT OF CHEMISTRY  
MAHARAJA'S COLLEGE ERNAKULAM

CERTIFICATE


This is to certify that the project report entitled "One electron oxidations of Kynurenic acid and Xanthurenic acid" submitted by Shino Chacko, fourth semester student of MSc Applied Chemistry is a bonafide report of the work carried out at BARC, Mumbai and at Department of Chemistry, Maharaja's College, Ernakulam under my guidance. Also, I endorse that the experimental studies at BARC, Mumbai were conducted under the supervision of Dr. Beena G. Singh.

Place: Ernakulam  
Date:

  
Dr. Prasanthkumar K. P.  
Assistant Professor of Chemistry  
Maharaja's College, Ernakulam.

Dr. PRASANTHKUMAR K P  
Assistant Professor of Chemistry  
Maharaja's College, Ernakulam  
Kerala - 682011



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



# ONE ELECTRON OXIDATIONS OF KYNURENIC ACID AND XANTHURENIC ACID

Dissertation Submitted to Mahatma Gandhi University, Kottayam in  
Partial Fulfilment for the Award of Master of Science Degree in Chemistry

by

SHINO CHACKO

(REG.No.16630005)

MSc APPLIED CHEMISTRY (2016-2018)

Under the Supervision of Dr. PRASANTHKUMAR K P



POST GRADUATE AND RESEARCH DEPARTMENT OF CHEMISTRY

MAHARAJA'S COLLEGE, ERNAKULAM

May, 2018



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



भारतीय कृषि अनुसंधान परिषद  
केन्द्रीय समुद्री मात्स्यिकी अनुसंधान संस्थान  
(कृषि अनुसंधान एवं शिक्षा विभाग, कृषि एवं किसान कल्याण विभाग, भारत सरकार)  
Department of Agricultural Research  
Indian Council of Agricultural Research  
Central Marine Fisheries Research Institute



Department of Agricultural Research and Education, Ministry of Agriculture and Farmers' Welfare, Govt. of India  
पोस्ट बॉक्स नं. 1603, एरनाकुलम नॉर्थ पी.ओ. कोची - 682018, केरल, भारत  
Post Box No. 1603, Ernakulam North P.O, Kochi - 682018, Kerala, India  
Phone: 91 484 2394867/2391407, Fax: 91 484 2394909/2396685, Email: director@cmfri.org.in, Web: www.cmfri.org.in

F.No. PME/Gen./2016  
Dated: 09/08/2017

To

Dr. P.S. Ajitha,  
Principal,  
Maharaja's College (Autonomous),  
Ernakulam - 682 011.

Sub: Invitation for collaboration with ICAR-CMFRI, Kochi - Regarding.


Ref: Your letter No. Nil dated 18/07/2017.

Sir,

It is really pleasure to know that Maharaja's College, Ernakulam is organizing a 'Science Popularization' programme entitled 'Know Harmful Algal Blooms - Save Life'. ICAR-CMFRI, Kochi is delighted to be a part of this programme and would like to extend all possible support for the conduct of this activity. As a Nodal point for coordinating this programme please contact Dr. Grinson George, Sr. Scientist (Mob. 8547857036).

Wish you good luck.

Yours faithfully,

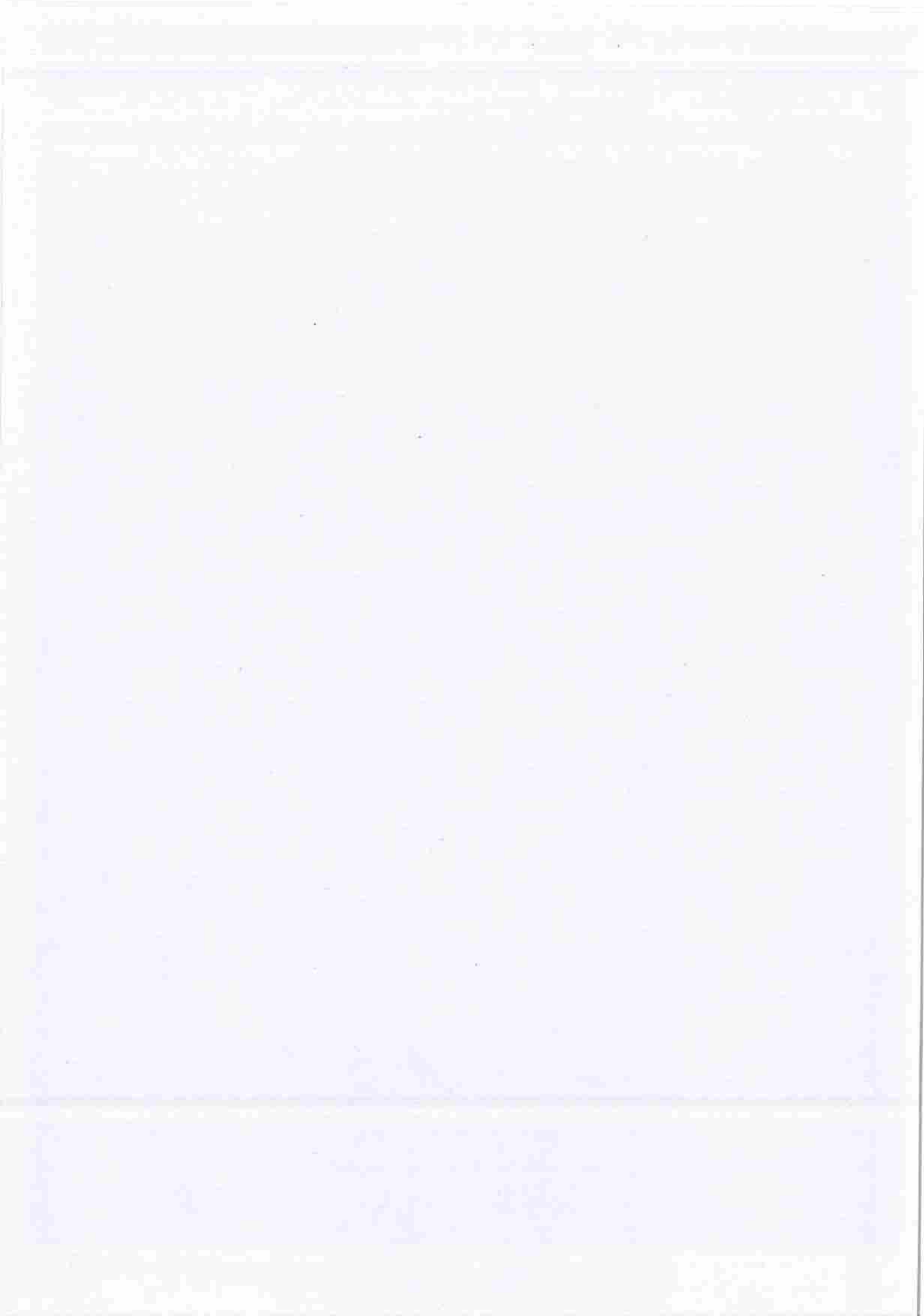
  
(A. Gopalakrishnan)  
Director

Copy to: Dr. Grinson George, Sr. Scientist, Fishery Resource Assessment  
Division, ICAR-CMFRI, Kochi



SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM







പ്രായോഗിക രസതന്ത്ര വിഭാഗം  
**DEPARTMENT OF APPLIED CHEMISTRY**  
കൊച്ചി ശാസ്ത്ര സാങ്കേതിക സർവ്വകലാശാല  
**COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
KOCHI - 682 022, KERALA, INDIA

**Dr.P.V.MOHANAN KOCHI**  
**ASSISTANT PROFESSOR**

**APRIL 2018**

### **CERTIFICATE**

This is to certify that the thesis entitled "Synthesis And Characterization Of MOF-5" is an embodiment of the work carried out by Ms.AryamolSanthosh under my supervision in the Department of Applied Chemistry,Cochin University of Science and Technology,for the partial fulfilment of the degree of Master Of Science In PharmaceuticalChemistryof the Mahatma Gandhi University,Kottayam.

  
**Dr.P.V.MOHANAN**





**SPECIAL GRADE PRINCIPAL**  
**MAHARAJA'S COLLEGE**  
**ERNAKULAM**

Phone: 91-484-2575804 / 91-484-2862420/21, Fax : 91-484-2577595  
E-mail: chem@cusat.ac.in, Web: http://chem.cusat.ac.in



# SYNTHESIS AND CHARACTERIZATION OF MOF-5

*Dissertation submitted to the Maharaja's College in partial fulfillment  
of the requirements for the award of the Degree of*

## MASTER OF SCIENCE IN PHARMACEUTICAL CHEMISTRY

By

**ARYAMOL SANTHOSH**

**REG.NO. 16670002**



**POSTGRADUATE AND RESEARCH DEPARTMENT OF CHEMISTRY**

**MAHARAJA'S COLLEGE**

**ERNAKULAM, KERALA**

**APRIL 2018**



**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM**

**Growth & Characterisation of ZnS Thin films by  
Spray Pyrolysis method for Solar Cell application**

Project report submitted to Maharajas College (Autonomous) in partial  
fulfillment of the requirements for the award of the degree of

*Master of Science*

*In*

*Physics*

Greeshma George

Reg. no. 15680009

Maharajas College (Autonomous)

Ernakulam



**Maharaja's  
College  
Ernakulam**



Be. Accredited by NAAC with 'A Grade'  
Affiliated to Mahatma Gandhi University  
Centre of Excellence under Govt. of Kerala  
Identified by UGC as College with Potential for Excellence

Under the guidance of

**Dr. M. K. Jayaraj**

Department of Physics

Cochin University of Science and Technology



*[Signature]*  
**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM**



**Growth & Characterisation of ZnS Thin films by  
Spray Pyrolysis method for Solar Cell application**

Project report submitted to Maharajas College (Autonomous) in partial  
fulfillment of the requirements for the award of the degree of

*Master of Science*

*In*

*Physics*

Nayana George

Reg. no. 15680010

Maharajas College (Autonomous)

Ernakulam



**Maharaja's  
College  
Ernakulam**



**A GOVERNMENT  
AUTONOMOUS COLLEGE**

Re-Accredited by NAAC with 'A Grade'  
Affiliated to Mahatma Gandhi University  
Centre of Excellence under Govt. of Kerala  
Identified by UGC as College with Potential for Excellence

**Under the guidance of**

**Dr. M. K. Jayaraj**

**Department of Physics**

**Cochin University of Science and Technology**



**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM**



CENTRE FOR  
WATER  
RESOURCES  
DEVELOPMENT AND  
MANAGEMENT



An Institution of the Kerala State Council for Science, Technology and Environment, Government of Kerala

CERTIFICATE


This is to certify that Ms. Sreelakshmy M.S., Department of Chemistry, Maharaja College, Ernakulam has successfully completed project work in Centre for Water Resources Development and Management (CWRDM) as part of BSc. Chemistry-Environment and Water Management course from 20.11.2017 to 29.11.2017.

Project title: *Analysis of different industrial effluent samples.*

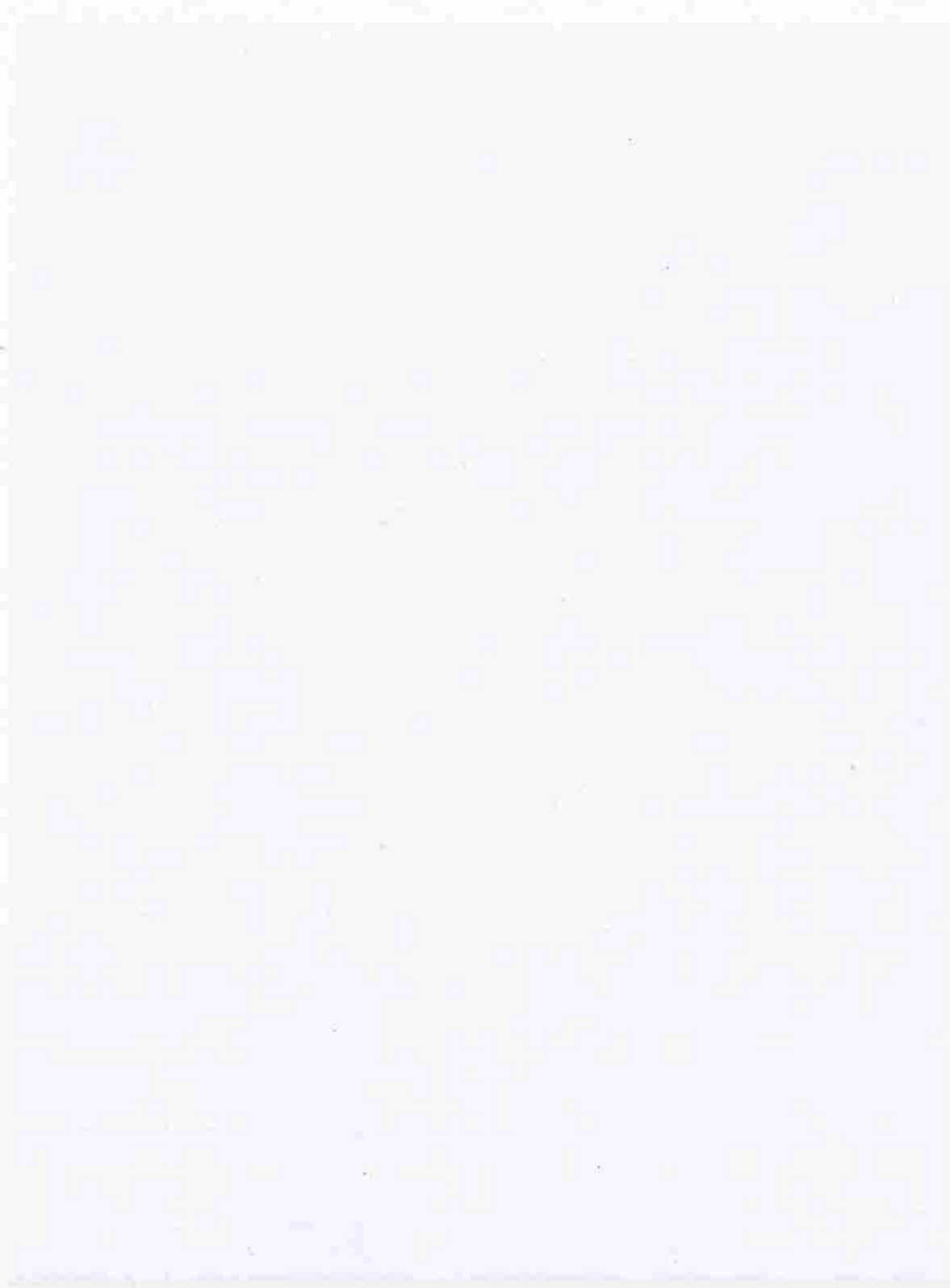
Dr. P. S. Hari Kumar  
Senior Principal Scientist & Head,  
Water Quality Division

Date: 29.11.2017



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM







# ST. JOSEPH'S COLLEGE

**AUTONOMOUS** College with Potential for Excellence Re-accredited with A+ Grade

DEVAGIRI, CALICUT-673008, KERALA

Affiliated to the University of Calicut

## Appendix-II

### PROJECT COMPLETION CERTIFICATE (FOR ASPIRE SCHOLARSHIP - 2017-18)

This is to certify that Smt. FATHIMA ZANBAKH, MSc Botany student of MAHARAJAS COLLEGE, ERNAKULAM affiliated to MG University, Kottayam has successfully completed her Aspire Scholarship Project/Internship entitled "INVESTIGATION ON THE INFLUENCE OF WATER AND EDAPHIC FACTORS ON FLORISTIC COMPOSITION NADERI AND ANELAKKADAVU WETLANDS IN CALICUT DISTRICT" within the stipulated month(s) from 15.04.2018. to 15.05.2018. under the guidance of Dr. Delse P Sebastian, St. Joseph's College, Devagiri, Kozhikode.

Dr. Delse P. Sebastian  
Assistant Professor  
Dept. of Botany  
St. Joseph's College,  
Devagiri, Kozhikode - 673 008

(Guide of Host Institution)



(Head of the Host Institution)  
**PRINCIPAL**  
St. Joseph's College (Autonomous)  
Devagiri, Calicut-673 008

Phone: office: 0495-2355901, Principal: 0495-2355828, Res: 2355134, Fax: 0495 2355828  
E-mail: [ajcddevagiri@yahoo.co.in](mailto:ajcddevagiri@yahoo.co.in), Web: [www.devagiricollege.org](http://www.devagiricollege.org)



SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



THE UNIVERSITY OF CHICAGO  
DIVISION OF THE PHYSICAL SCIENCES  
DEPARTMENT OF CHEMISTRY

1962

RESEARCH REPORT NO. 100

BY

ROBERT M. WAYNE

AND

WILLIAM H. GLAZIER

DEPARTMENT OF CHEMISTRY

UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

1962

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28/8/17



Estd 1972

# GOVERNMENT COLLEGE KOTTAYAM

(NAAC Re-Accredited by A Level. Affiliated to M.G. University)

NATTAKOM P.O., KOTTAYAM, KERALA 686013

PHONE: 0481 2363116

Website: [www.govtcollegekottayam.com](http://www.govtcollegekottayam.com) Email: [www.gckottayam@gmail.com](mailto:www.gckottayam@gmail.com)

No.B2-1050/2017

Dated: 23-08-2017

Principal

The Principal  
Maharaja's College,  
Ernakulam -11

Dear Madam,

Ref:- Invitation letter for collaboration from Botany Department,  
Maharaja's College, Ernakulam dated: 18-07-2017

We are extremely glad to inform the willingness of the Botany Department, Government College Kottayam to collaborate with the Botany Department of Maharaja's College, Ernakulam in the programme titled " Know Harmful Algal Blooms-save Life", a programme funded by KSCSTE as part of "Science Popularization" programme. Sri. Jazir Haneef, Assistant Professor of Botany is appointed as the nodal officer for the smooth functioning of the programme.

We are most grateful for your offer of collaboration from your reputed institution and we look forward to a fruitful association.

Yours faithfully,



*[Signature]*  
Principal  
Government College  
Kottayam

Copy to: Sri. Jazir Haneef ( Asst. Professor of Botany)

Received a copy  
28/8/17





THE UNIVERSITY OF CHICAGO LIBRARY  
1207 EAST 58TH STREET  
CHICAGO, ILLINOIS 60637  
TEL: 773-936-3200  
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1207 EAST 58TH STREET  
CHICAGO, ILLINOIS 60637  
TEL: 773-936-3200  
WWW.CHICAGO.LIBRARY.EDU

Dr. Mahesh Hariharan *FRSC*  
Associate Editor, Photochemical and Photobiological Sciences  
Associate Editor, *RSC Advances*  
Associate Professor and Head, School of Chemistry  
Indian Institute of Science Education and Research-Thiruvananthapuram (IISER-TVM)  
CET Campus, Sreekrayani, Thiruvananthapuram, Kerala-695 016  
Telephone: (91)-471-2597437; Fax: (91)-471-2597427  
Email: mahesh@iiser-tvm.ac.in or mahesh.hra@gmail.com



31-05-2018

To whomsoever it may concern,

This is to certify that Mr. Aashin Kumar Mallya, Second Year M.Sc. Chemistry Student from Maharaja's College, Ernakulam has worked as summer research fellow in my research laboratory for a period of one month starting from 1<sup>st</sup> May 2018 till 31<sup>st</sup> May 2018.

Sincerely,

  
Dr. Mahesh Hariharan

Dr. Mahesh Hariharan  
Associate Professor  
School of Chemistry  
IISER-TVM



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH THIRUVANANTHAPURAM**

An autonomous Institution of the Ministry of Human Resource Development,

Govt. of India

Vithura, Thiruvananthapuram-695551, Kerala, INDIA



**CERTIFICATE**

It is certified that the work described in this report entitled '**ATTEMPT TO SYNTHESISE CORE-SUBSTITUTED NAPHTHALENE DIIMIDE**' is a bonafide record of the project work carried out as a part of her summer training project by Ms. **Sumetha. U. Shenoy** under my supervision in at school of chemistry, Indian institute of science education and research, Thiruvananthapuram, India.




Dr. Mahesh Hariharan

Associate Professor

School of Chemistry

IISER-TVM



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MAHARAJA'S COLLEGE  
ERNAKULAM

भारतीय  
सांस्कृतिक  
सम्बन्ध  
परिषद् | INDIAN  
COUNCIL FOR  
CULTURAL  
RELATIONS

No. ICCR/ 1 /2017

3 Oct., 2017

**APPOINTMENT ORDER**

Reference your letter No F2/106/2017/HEDN dated 19 May, 2017 forwarding therewith application of Dr. Liyaqath Ali, Assistant Professor in Arabic, Maharajas College, Ernakulam for the post of Director at Indian Cultural Centres abroad as foreign assignment.

The Ministry of External Affairs has approved the appointment of Dr. Liyaqath Ali as Director, Maulana Azad Centre for Indian Culture, Cairo, Egypt for a period upto three years with the diplomatic rank of Second Secretary with Representational Grant (RG) and other entitlements under IFS (PLCA) Rules and extant norms, guidelines & orders of ICCR. The diplomatic equation of Dr. Liyaqath Ali shall not be upgraded during his tenure abroad due to any reason such as revision of pay scale from the retrospective or prospective date, earning of annual increment (5), promotion in present cadre, grant of MCAP etc. The employee will not be entitled to benefit of promotion which would have been due to him during the period of appointment.

The appointment is subject to the provisions of the agreement to be executed by Dr. Liyaqath Ali with the Council.

The various entitlements of Dr. Liyaqath Ali would broadly be as under:-

**Tenure:** The assignment will be for a period upto three years. The period of appointment will commence from the date he joins the duties of his post at the Council's Headquarters, New Delhi.

**Pay:-** Basic pay of Dr. Liyaqath Ali will be fixed at Rs 26,580/- in the pay band-3 (Rs 15600-39100 +GP6000) drawing at his parent department with annual increments to the next higher stages in the scale as admissible under the rules. No computation duty allowance will be admissible to him.

Living time/travelling allowance/compensatory allowance etc. will be admissible according to the rules applicable to the India-based non-IFS officers posted abroad from the Council.

**Foreign Allowance:-** Dr. Liyaqath Ali will be entitled to draw foreign allowance admissible to a Second Secretary (with RG) in Embassy of India, Cairo subject to the conditions as may be laid down by the Ministry of External Affairs.

आजाद भवन, इन्द्रप्रस्थ इस्टेट, नई दिल्ली-110002  
MAULANA AZAD BHAVAN, INDRAPRASTHA ESTATE, NEW DELHI - 110 002  
स्वा.सं./Tel. 23379309, 23379310 फ़ैक्स/Fax 23378639, 23378647, 23370732, 23378783,  
23379509 • वेबसाइट/Website : www.iccr.gov.in

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MAHARAJA'S COLLEGE  
ERNAKULAM



- c. To supervise the library and reading room at the Centre.
- d. To organise and also deliver lectures on Indian subjects at the Centre and in other places in Egypt.
- e. To maintain contacts with educational, cultural and creative organisations and publishing houses.
- f. To provide accurate information on all aspects of Indian civilizations, culture and contemporary developments to interested individuals and organisations.
- g. In general, to do such work as may be assigned to her from time to time by the Council or by the Ambassador of India to promote the objectives of the ICCR.
- 7. ICCR is the competent and final authority for all administrative and financial matters with respect to the affairs of the Indian Cultural Centre abroad and its officers/resource persons etc.

Dr. Liyaqath Ali may join the Centre at Cairo on the basis of issue of this order as early as possible. However, exact date from which the services of Dr. Liyaqath Ali is required by the Council will be intimated in due course on receipt of acceptance from your side. It is, therefore, requested to send the acceptance to this offer urgently latest by 11.10.2017 enable to completing of all procedural/travel formalities. Departure formalities to be completed with the help of Shri Vinay Vohra Sr. Programme Director (Admin/ROs), ICCR.



(Namarta S. Kumar)  
Dy. Director General (NK)

Secretary to the Govt. of Kerala  
High Education (F) Department  
Thiruvananthapuram.


Copy to:-

1. Ambassador, Embassy of India, Cairo, Egypt.
2. DS (FSP), MEA, New Delhi.
3. Principal, Maharaja's College, Ernakulam, Kochi-682 011, Kerala.
4. Dr. Liyaqath Ali, Asstt. Professor and Head, Research Department of Arabic, Maharaja's College, Ernakulam, Kochi-682 011, Kerala with the request to send his acceptance to the offer of appointment urgently latest by 06.10.2017.
5. PS to President, ICCR.
6. DG Office.
7. Sr. Programme Director (ICCs), ICCR.



(Namarta S. Kumar)  
Dy. Director General (NK)

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SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM





d) Dr. Liyaqath Ali will be provided suitable rent-free accommodation as per entitlement of Second Secretary level officer in the Embassy of India, Cairo

e) Dr. Liyaqath Ali and his spouse will be entitled to medical facilities as admissible to an officer of comparable status in the Embassy of India, Cairo under the AMA Scheme of Govt. of India, Ministry of External Affairs for the India-based officers and staff in Indian Missions abroad.

f) Dr. Liyaqath Ali and entitled dependent members of family are entitled to travel by Air India in Economy Class by the lowest available airfare for journey (to and fro), by the approved route. The relevant provisions of IFS (PLCA) are to be followed. He will be entitled to transport (inclusive of free allowance given by Air India) 2800 kgs. of personal effects by surface route or 1120 kgs. of personal effects by air route at Government cost, as unaccompanied air cargo (to and fro) by the approved route in one instalment. Final return passage will be admissible on completion of assignment.

g) During the period of assignment, he will be entitled to 30 days leave per year. He will not carry over on return any credit of un-availed leave. Salary for the period of leave earned and availed during assignment period will be paid by the Council.

h) During the currency of her assignment with the Council, Dr. Liyaqath Ali will also be governed by the provisions of the Indian Official Secrets Acts 1923 and other administrative, conduct and disciplinary rules as applicable to Government servant viz the Central Civil Service (Conduct) Rules 1964, the Central Civil Services (Classification, Control and Appeal) Rules 1985 and extant norms, guidelines & orders of ICCR.

i) Dr. Liyaqath Ali shall not except as required by his duties under his assignment, use for his own benefit or gain or divulge to any persons, firm, company or other organization whatsoever any confidential information belonging to the ICCR or relating to its affairs or dealings which may come to his knowledge during his assignment.

3. The other entitlements of Dr. Liyaqath Ali will be regulated according to the provisions of IFS (PLCA) Rules as applicable to IFS officials with the prior approval of ICCR.

4. No member of his family staying with him in Cairo shall accept any gainful employment without prior approval of the Council.

5. Neither Dr. Liyaqath Ali nor any member of his family shall indulge in activities of political nature during their stay in Cairo.

6. The duties of Dr. Liyaqath Ali will include inter-alia, the following.

7. Director of the Maulana Azad Centre for Indian Culture, Cairo and in that capacity be responsible for its administration and following activities:-

a. To organise cultural evenings, exhibitions of Indian books, photographs, paintings and other art forms.

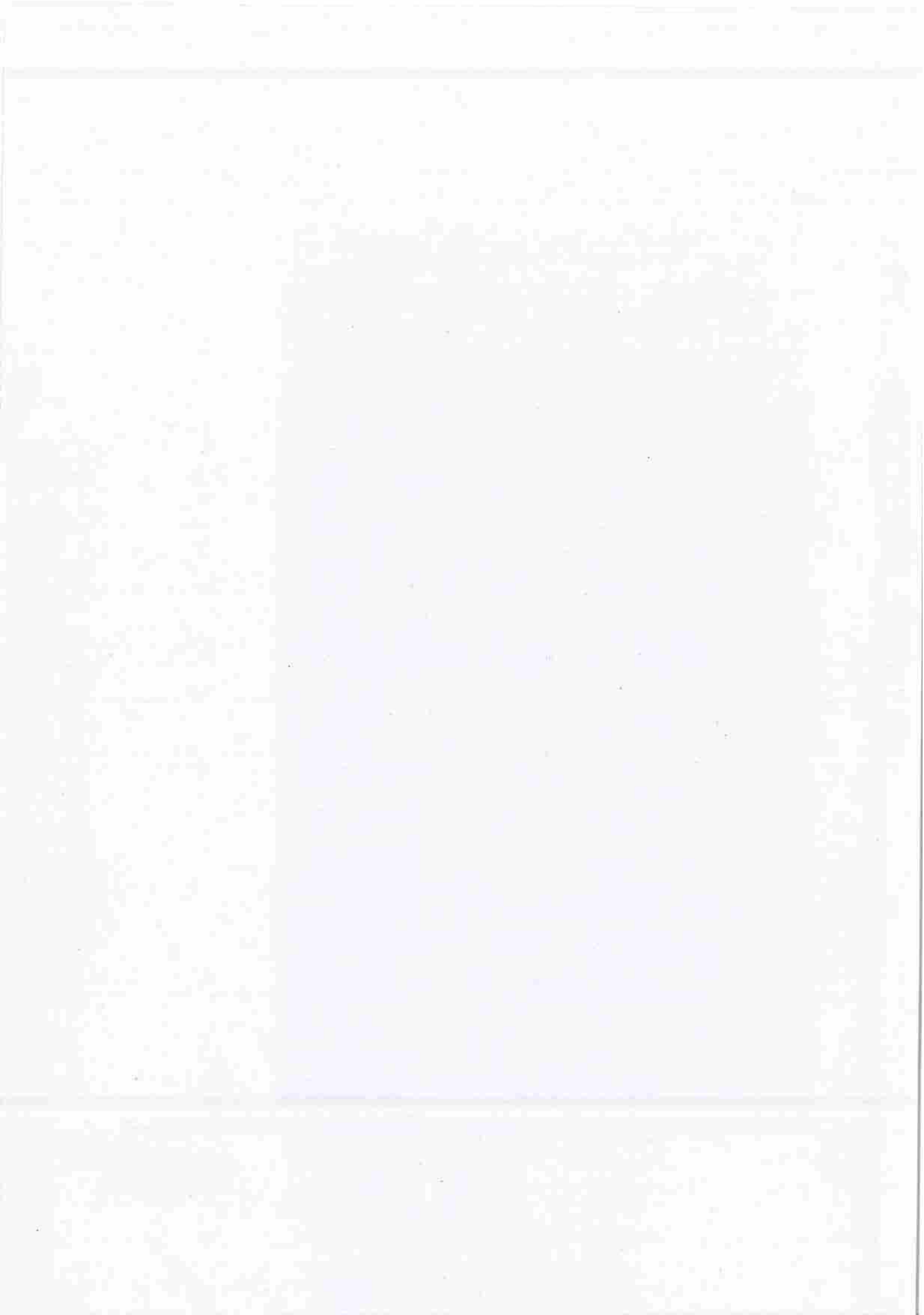
b. To organise film shows, performances of dance and music, seminars and discussion on India.

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MAHARAJA'S COLLEGE  
ERNAKULAM







**Kerala Institute of Local Administration**  
Mulamkunnathukavu P.O, Thrissur - 680 581

## CERTIFICATE

Certified that Shri. / Smt ..... *Ashok Vijayan* .....

..... *Student, BA Economics (Honours) Maharaja's College, Ernakulam* .....

has participated in the training programme on.....

..... *Local Governance Interface (Internship Programme)* .....

from ..... *15.02.2018* ..... to ..... *28.02.2018* ..... at KILA



*[Signature]*  
**DIRECTOR**



*[Signature]*  
**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM**





**Kerala Institute of Local Administration**  
Mulamkunnathukavu P.O, Thrissur - 680 581

## CERTIFICATE

Certified that Shri. / Smt ..... ***Bijoy K B*** .....

..... ***Student, BA Economics (Honours) Maharaja's College, Ernakulam*** .....

has participated in the training programme on.....

..... ***Local Governance Interface (Internship Programme)*** .....

from ..... **15.02.2018** ..... to ..... **28.02.2018** ..... at KILA



  
**DIRECTOR**



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Mulamkunnathukavu P.O, Thrissur - 680 581

## CERTIFICATE

Certified that Shri. / Smt ..... **Athira Unni**  
.....  
**Student, BA Economics (Honours) Maharaja's College, Ernakulam**  
.....  
has participated in the training programme on.....  
**Local Governance Interface (Internship Programme)**  
.....  
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**DIRECTOR**

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ERNAKULAM**







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## CERTIFICATE

Certified that Shri. / Smt ..... **Karthik R** .....

..... **Student, BA Economics (Honours) Maharaja's College, Ernakulam** .....

has participated in the training programme on.....

..... **Local Governance Interface (Internship Programme)** .....

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**CERTIFICATE**

Certified that Shri. / Smt ..... **Megha Mathew**  
.....  
**Student, BA Economics (Honours) Maharaja's College, Ernakulam**  
.....  
has participated in the training programme on.....  
**Local Governance Interface (Internship Programme)**  
.....  
from **15.02.2018** to **28.02.2018** at KILA



*[Signature]*  
**DIRECTOR**

*[Signature]*  
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## CERTIFICATE

Certified that Shri. / Smt ..... **Muhzina P P**  
.....  
**Student, BA Economics (Honours) Maharaja's College, Ernakulam**  
.....  
has participated in the training programme on.....  
**Local Governance Interface (Internship Programme)**  
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## CERTIFICATE

Certified that Shri. / Smt ..... *Nasrin M N*  
.....  
*Student, BA Economics (Honours) Maharaja's College, Ernakulam*  
.....  
has participated in the training programme on.....  
*Local Governance Interface (Internship Programme)*  
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## CERTIFICATE

Certified that Shri. / Smt ..... **Neenu Jeejan** .....

..... **Student, BA Economics (Honours) Maharaja's College, Ernakulam** .....

has participated in the training programme on.....

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**MAHARAJA'S COLLEGE**  
**ERNAKULAM**  
**JAM**



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Mulamkunnathukavu P.O, Thrissur - 680 581

## CERTIFICATE

Certified that Shri. / Smt ..... **Reshma A** .....

..... **Student, BA Economics (Honours) Maharaja's College, Ernakulam** .....

..... **has participated in the training programme on** .....

..... **Local Governance Interface (Internship Programme)** .....

..... **from 15.02.2018 to 28.02.2018 at KILA** .....



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ERNAKULAM**





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## CERTIFICATE

Certified that Shri. / Smt ..... **Sandra M S**  
.....  
**Student, BA Economics (Honours) Maharaja's College, Ernakulam**  
.....  
has participated in the training programme on.....  
**Local Governance Interface (Internship Programme)**  
.....  
from **15.02.2018** to **28.02.2018** at KILA



  
**DIRECTOR**

  
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ERNAKULAM**



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## CERTIFICATE

Certified that Shri. / Smt ..... **Shabna A K** .....

..... **Student, BA Economics (Honours) Maharaja's College, Ernakulam** .....

has participated in the training programme on.....

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## CERTIFICATE

Certified that Shri. / Smt ..... ***Shereena Sainudheen***

..... ***Student, BA Economics (Honours) Maharaja's College, Ernakulam***

has participated in the training programme on.....

..... ***Local Governance Interface (Internship Programme)***

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## CERTIFICATE

Certified that Shri. / Smt ..... **Sreelakshmy P D** .....

..... **Student, BA Economics (Honours) Maharaja's College, Ernakulam** .....

has participated in the training programme on.....

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**DIRECTOR**

*[Signature]*  
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## CERTIFICATE

Certified that Shri. / Smt ..... *Vijayalakshmi S Shenoy*

.....  
*Student, BA Economics (Honours) Maharaja's College, Ernakulam*

has participated in the training programme on.....

.....  
*Local Governance Interface (Internship Programme)*

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**DIRECTOR**



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## CERTIFICATE

Certified that Shri. / Smt ..... *Ameer Aslam P A* .....

..... *Student, BA Economics (Honours) Maharaja's College, Ernakulam* .....

has participated in the training programme on.....

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## CERTIFICATE

Certified that Shri. / Smt ..... *Amina M M* .....

..... *Student, BA Economics (Honours) Maharaja's College, Ernakulam* .....

has participated in the training programme on.....

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## CERTIFICATE

*Ashina C N*

Certified that Shri. / Smt .....

*Student, BA Economics (Honours) Maharaja's College, Ernakulam*

has participated in the training programme on.....

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**DIRECTOR**



*[Signature]*  
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## CERTIFICATE

Certified that Shri. / Smt ..... *Karishma Vinuraj* .....

..... *Student, BA Economics (Honours) Maharaja's College, Ernakulam* .....

has participated in the training programme on.....

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**DIRECTOR**



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## CERTIFICATE

Certified that Shri. / Smt ..... *Hamelin Cleatus* .....

..... *Student, BA Economics (Honours) Maharaja's College, Ernakulam* .....

has participated in the training programme on.....

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*[Signature]*  
**DIRECTOR**

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**CERTIFICATE**

Certified that Shri. / Smt ..... *Femin Johnson* .....

..... *Student, BA Economics (Honours) Maharaja's College, Ernakulam* .....

has participated in the training programme on.....

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## CERTIFICATE

Certified that Shri. / Smt ..... **Deepthi S** .....

..... **Student, BA Economics (Honours) Maharaja's College, Ernakulam** .....

has participated in the training programme on.....

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*[Signature]*  
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**KERALA STATE COUNCIL FOR SCIENCE, TECHNOLOGY AND ENVIRONMENT**  
**An Autonomous body of the Government of Kerala**

KSCSTE - Science Popularization Programme - proposal entitled 'Know Harmful Algal Blooms - Save Lives' submitted by Shyam Kumar S, Assistant Professor, Dept. of Botany, Maharaja's College, Ernakulam - financial assistance - Sanctioned - orders issued.

Council (P) Order No. 459/2017/KSCSTE

Dated: Thiruvananthapuram, 08.09.2017

- Ref: - (1) Project Proposal dt: 30.5.2017  
(2) Minutes of the 30<sup>th</sup> meeting of SPC held on 15<sup>th</sup> June 2017  
(3) Letter No. SPC/16/2017/KSCSTE, dt: 29.6.2017  
(4) File No. SPC/16/2017/KSCSTE

**ORDER**

1. As per reference (1) cited above, Shyam Kumar S, Assistant Professor, Dept. of Botany, Maharaja's College, Ernakulam submitted a proposal seeking financial assistance for the proposal entitled 'Know Harmful Algal Blooms - Save Lives'. The Science Popularization Committee (SPC) of the Council evaluated the proposal and recommended to support the Programme by offering an amount of Rs. 3,00,000/-. As per reference (3) cited above, the Principal, Maharaja's College, Ernakulam executed an agreement on the Terms and Conditions, in the requisite stamp paper worth Rs. 200/-.
2. Kerala State Council for Science, Technology and Environment (KSCSTE) is pleased to accord sanction for the project entitled 'Know Harmful Algal Blooms - Save Lives' and to support the programme by providing financial grant of Rs. 3,00,000/- (**Rupees Three Lakh only**). The sanctioned budget heads are as follows.

Sl. No.	Item	Amount (Rs.)
1.	Honorarium	60,000
2.	Consumables	90,000
3.	Organizing Expenses	60,000
4.	Travel Expenses	30,000
5.	Publicity Materials	30,000
6.	Documentation Expenses	30,000
	<b>Total</b>	<b>3,00,000</b>

3. The duration of the project shall be one year only. Due acknowledgment to KSCSTE should be provided in all brochures, invitation cards, publicity materials, etc. brought out in connection with the programme as 'Supported and sponsored by KSCSTE'.
4. Based on the recommendations of the SPC and as per the Council norms, 50% of the sanctioned amount will be released as initial payment. The balance amount will be released based on assessment of progress of the project and subject to the submission of audited financial statements (Statement of Expenditure and Utilization Certificate).
5. KSCSTE is pleased to accord sanction for the release of Rs. 1,50,000/- (**Rupees One Lakh and Fifty Thousand only**) being 50% of the sanctioned amount for the above mentioned Science Popularization Programme. The amount will be disbursed to **The Principal, Maharaja's College, Ernakulam - 682 011** by means of National Electronic Fund Transfer (NEFT) as per their bank details as follows.

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Beneficiary Account Name	Principal, Maharaja's College
Beneficiary Account Number (SB/CC)	67204833490
Beneficiary IFSC code	SBIN0070143
Name of Bank	State Bank of India, CSI Complex, Broadway, Ernakulam
Beneficiary Address	Maharaja's College, Ernakulam

6. The Programme Co-ordinator should ensure that the Terms and Conditions executed are strictly followed during the implementation of the Programme. Date of start of the project should be intimated to the Council and Quarterly Progress Report in the prescribed format with effect from the date of start of the project should be submitted in time.
7. The expenditure in this regard will be met from the Council's budget head **III Schemes and Programmes of KSCSTE C (I) Science Popularization Scheme.**

The above sanction has been issued under the delegated powers of the Council, vide sanction No.450/DIR/2017-2018, dated 08.09.2017.

  
Dr. S. Pradeep Kumar  
Director, KSCSTE

To  
The Principal, Maharaja's College, Ernakulam - 682 011

Copy to:  
Shyam Kumar S, Assistant Professor, Dept. of Botany, Maharaja's College, Ernakulam - 682 011  
Cash Section/ Stock File/Office Copy



  
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No. BT/IN/Indo-US/Foldscope/39/2015

Government of India  
Ministry of Science & Technology  
Department of Biotechnology

Block No.2, 6-8th Floors,  
CGO Complex, Lodi Road,  
New Delhi - 110 003.  
Dated: 20.03.2018

Admin Order

Sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rules, 1978, for the payment of Rs.3120.00 Lakhs (Rupees Thirty One Crore Twenty Lakhs Only) to Biotech Consortium India Limited (BCIL), 5<sup>th</sup> Floor, Anuvrat Bhawan, 210, Deen Dayal Upadhaya Marg, New Delhi - 110002 towards the "Towards disbursement of Micro grant for implementation of projects under the Foldscope scheme" as per break-up given below:

(Rs. in Lakhs)

Sr. No.	Item	Number of Schools/ Colleges/ Institute/ University	Total budget per School/ Colleges/Institute/ University	Total Budget	1 <sup>st</sup> Installment (75% of total budget)	2 <sup>nd</sup> Installment (25% of total budget)
I	NER Schools (Category-A)	33	4.00	132.00	98.00	34.00
II	Other Regions of India Schools (Category-A)	84	4.00	336.00	252.00	84.00
III	NER Colleges/Institute / Universities (Category-B)	81	8.00	648.00	486.00	162.00
IV	Other Regions of India Colleges/Institute / Universities (Category-B)	247	8.00	1976.00	1483.00	493.00
Total (A)				3092.00	2319.00	773.00
V	Budget for the Project Secretariat to BCIL (B)			28.00	28.00	0.00
Grand Total (A+B)				3120.00	2347.00	773.00*

\*The second installment will be released after the review of technical & scientific progress report and submission of UC/SE after 6 months.

2. The list of approved School/Colleges/Institute/ Universities of category A & B may be seen at Annexure-I to IV.



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3. The budget details for awardees under category 'A' and category 'B', and the budget Project Secretariat to BCIL, may be seen at Annexure- V.
4. The budget for Item-I [NER (Schools)] and Item-III [NER (Colleges/Institute/ University)] debitable by the NER budget head.
5. The budget for Item-II (Other Regions of India Schools), IV (Other Regions of India Colleges/Institute Universities) & V (Project Secretariat to BCIL, Detailed Budget for Category A & B) will be debitable from Biotechnology Research and Development (R&D) head.
6. The Foldscope and Micro grants shall be disbursed to the Schools, Colleges and Universities by the NER-BPMC/BCIL, as per the Annexure-I to V.
7. Time Schedule: The duration of the project is 1 Year 0 Month from the date of this sanction order.
8. The expenditure involved is debitable to:

Demand No. 85	Department of Biotechnology
3425	Other Scientific Research 2017-2018
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development
3425.60.200.29.17	Assistance for Research and Development
3425.60.200.29.17.31	Grants-in-aid General

9. The other terms and conditions governing this sanction are attached at Annexure- VI.
10. A Memorandum of Agreement (MoA) will be signed between the Department of Biotechnology and the grantee institution on Non-Judicial stamp paper Rs. 100/- in the enclosed format and the second release/installment will be made only after signing of MoA by the grantee institutions and its acceptance by DBT. In case of NGO or Private Institution, MOA signed is mandatory first release.
11. The Institute/Agency will keep the whole of the grant in a Bank Account earning interest, and the interest so earned should be reported to DBT in the Utilization Certificate and Statement of Expenditure. The interest so earned will be treated as created to the institute/Agency and shall be adjusted towards further installment of the grant and or at the time of Final Settlement of Accounts.
12. No International Travel will be undertaken from the sanctioned project grant unless specified otherwise.
13. The Managing Director, Biotech Consortium India Limited (BCIL), 5<sup>th</sup> Floor, Anuvrat Bhawan, 210, Deen Dayal Upadhaya Marg, New Delhi - 110002 would be responsible for submission of Statements of Expenditure (SoE), utilization certificates (UC), Assets Certificates, Manpower staffing & expenditure details in prescribed DBT formats to DBT in respect of grants released in this project from time to time.



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14. As per Rule 236 (1) of GER 2017, the accounts of all Grantee Institutions or Organizations shall be open to inspection by the sanctioning authority and audit, both by the Comptroller and Auditor General of India under the provision of CAG(DPC) Act 1971 and internal audit by the Principal Accounts Office of the Ministry or Department, whenever the Institution or Organization is called upon to do so.
15. In case the whole or a part of the amount of the grant-in-aid is being refunded, an interest thereon as per Govt. of India shall be recovered.
16. As per Ministry of Finance OM No. C-13015(34)/NF: CGA/PEMS/Misc/2014-15/2095-2127 dated 03.03.2015 all transaction involving cash component has to be made through Public Financial Management System (PFMS) w.e. 01.04.2015 to each beneficiaries.
17. UC SE must show all the heads as per the sanction order.
18. This issues under the powers delegated to this Department and with the concurrence of IFD, DBT vide their SAN. No. 102/IFD/SAN/4849/2017-18 dated 16.03.2018.
19. This sanction order has been noted at Serial No. \_\_\_\_\_ in the Register of Grants.

*Vaishali Panjabi*  
(Vaishali Panjabi)  
Scientist 'D'

To,  
The Pay & Accounts Officer  
Department of Biotechnology  
Ministry of Science & Technology  
Lodhi Road, New Delhi-110 003

Copy to:-

1. The Principal Director of Audit (Scientific Departments), AGCR Building, New Delhi-110002.
2. The Pay & Accounts Officer, Department of Science & Technology, New Delhi-110016.
3. Cash Section, DIT. (2 copies).
4. IFD, DBT.
5. The Managing Director, Biotech Consortium India Limited (BCIL.), 5<sup>th</sup> Floor, Anuvrat Bhawan, 210, Deen Daya Upadhaya Marg, New Delhi - 110002
6. Sanction Folder.
7. US (IFD) to re-appropriate the budget for Item -I & III from the NER Budget.



*Vaishali Panjabi*  
(Vaishali Panjabi)  
Scientist 'D'

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ERNAKULAM



The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This not only helps in tracking expenses but also ensures compliance with tax regulations.

In the second section, the author provides a detailed breakdown of the monthly budget. It includes categories for housing, utilities, food, and entertainment. Each category is further divided into sub-items, such as rent, electricity, groceries, and dining out. This level of detail allows for a clear understanding of where the money is being spent.

The third section focuses on the analysis of the budget. It compares the actual spending against the planned budget for each month. This comparison helps in identifying areas where spending has exceeded the budget and where it has been kept within limits. The author notes that while housing and utilities remain relatively stable, there has been a noticeable increase in entertainment expenses.

Finally, the document concludes with a summary of the overall financial health. It states that while there are some areas for improvement, the budgeting process has been effective in controlling most expenses. The author suggests continuing to monitor spending closely and making adjustments as needed to stay on track.

KERALA UNIVERSITY OF FISHERIES & OCEAN STUDIES-  
കേരള ഫിഷറീസ്-സമുദ്രപഠന സർവ്വകലാശാല  
PANANGAD P.O., KOCHI 682 506, KERALA, INDIA

7703782, 2700598; Fax: 91-484-2700337; e-mail: [uypenangad@kufos.ac.in](mailto:uypenangad@kufos.ac.in) website: [www.kufos.ac.in](http://www.kufos.ac.in)

To

24-08-2017

The Principal  
Maharaja's College (Autonomous)  
Ernakulam- 682 011

Madam

Sub: KSCSTE 'Science Popularization' programme- collaboration- reg.

In response to your letter dated 18-7-2017, I am glad to inform that the Department of Aquatic Resource Management, Kerala University of Fisheries and Ocean Studies, Panangad is willing to collaborate with the your institute on the KSCSTE sponsored 'Science Popularization' programme on "Know Harmful Algal Blooms-Save Life". I also take this opportunity to nominate Dr. MP Prabhakaran, Assistant Professor (Fishery Oceanography), Department of Aquatic Environment Management, KUFOS as Co-ordinator from our side. I am also willing to extend all possible support from under my capacity as the Head, Department of Aquatic Environment Management for the successful implementation of the project.

Thanking you



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Yours sincerely

Dr. Ranjeet K

Associate Professor and Head  
Department of Aquatic Environment Management  
Kerala University of Fisheries and Ocean Studies

Panangad P.O.,  
Kochi - 682 506

Mobile: 9744171986

Email: [ranjeet.kufos@gmail.com](mailto:ranjeet.kufos@gmail.com)



Handwritten text in a cursive script, likely a letter or document. The text is mostly illegible due to the low resolution and blurriness of the image. Some faint words are visible, such as "Dear" at the top left and "Yours" at the bottom right. The text is arranged in several lines across the page.

Dear

Yours



**SREE SANKARACHARYA UNIVERSITY OF SANSKRIT**

*(Accredited by NAAC with 'A' Grade)*

KALADY, ERNAKULAM, KERALA – 683 574

Phone : 0484-2463380

**DEPARTMENT OF MUSIC**

**CERTIFICATE**

This is to certify that Dr. Pooja P. Sundaram, Assistant Professor, HoD, Department of Music, Govt. Maharaja's College, Ernakulam has guided Smt. Vani Venugopal for her project work under Aspire Scholarship Scheme, instituted by Govt. of Kerala for the work titled "Ramanatakam of Sri. Arunachala Kaviyar".

Place: Kalady  
Date : 20.11.2017

*Preethy K*  
Dr Preethy K.  
Head of the Department



*th*  
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*(Accredited by NAAC with 'A' Grade)*

KALADY, ERNAKULAM, KERALA – 683 574

Phone : 0484-2463380

DEPARTMENT OF MUSIC


**CERTIFICATE**

This is to certify that Dr. Pooja P. Sundaram, Assistant Professor, HoD, Department of Music, Govt. Maharaja's College, Ernakulam has guided Kum. Prima Pradeep for her project work under Aspire Scholarship Scheme, instituted by Govt. of Kerala for the work titled "Music in Ottanthullal : An analysis based on Rukmini Swayamvaram of Kunchan Nambiar.

Place: Kalady  
Date : 20.11.2017

  
Dr Preethy K.  
Head of the Department



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM

**SREE SANKARACHARYA UNIVERSITY OF SANSKRIT, KALADY**  
**DEPARTMENT OF MUSIC**

No.DS/Music/ASPIRE/SSUS/2018

Dated: 15.03.2018

**RELIEVING ORDER**

Ref: 1. Request from Ms.Petreeza Sabu


Ms. Petreeza Sabu, MA Music Final Year student of this University has been selected for the ASPIRE Scholarship for the year 2017-18. Vide the request referred above, Ms.Petreeza Sabu has requested to relieve her from the department to undertake internship/project from 16.03.2018

After considering the above, Ms. Petreeza Sabu is hereby relieved from the department w.e.f 16.03.2018 to conduct the internship/period for a period of 1 month from 19.03.2018 to 18.04.2018 at Maharajas College, Ernakulam under the guidance of Pooja P.Balasundaram, Assistant Professor & Head.

She is directed to report before the Head of the Institution/Department in which the internship/project work is being conducted and shall obtain a Joining Report at the time of joining and Relieving Order from the Head of the Institution on completion of the project.

To  
Ms.Petreeza Sabu

Copy to:  
1. The Head of the Department/Institution  
2. PS to Registrar

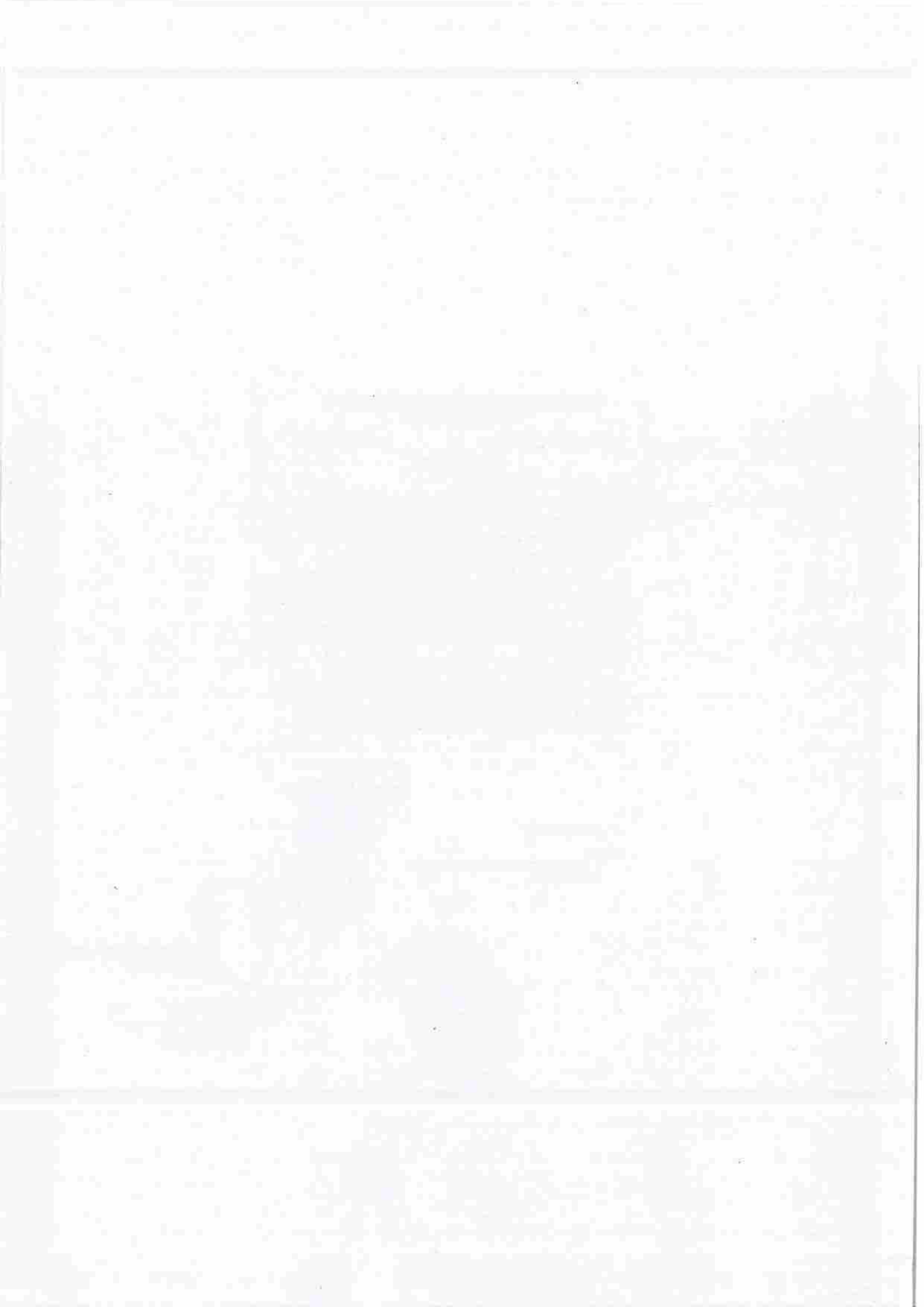
  
Head of the Department  
Department of Music  
Dr. MANJU GOPAL  
Associate Professor  
Department of Music  
Sree Sankaracharya University  
of Sanskrit, Kalady-688 534



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SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM







# Kerala Institute of Local Administration

Mulamkunnathukavu P.O, Thrissur - 680 581

## CERTIFICATE

Certified that *Shri / Smt* ..... *Mathija V.K.* .....

..... *Student, BA Economics(Honours), Maharaja's College, Ernakulam*

*participated in the training programme on* .....

*Local Governance Interface (Internship Programme)* .....

*from* ..... *04.01.2019* ..... *to* ..... *17.01.2019* ..... *at KILA*



*[Signature]*  
DIRECTOR

SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM





**Kerala Institute of Local Administration**  
Mulamkunnathukavu P.O, Thrissur - 680 581

**CERTIFICATE**

*Certified that Shri. / Smt .....* *Nimmy Shannad* .....

*..... Student, BA Economics (Honours), Maharaja's College, Ernakulam*

*participated in the training programme on .....*

**Local Governance Interface (Internship Programme)**

*from* **04.01.2019** *to* **17.01.2019** *at* **KILA**



**SPECIAL GRADE**  
**MAHARAJA'S COLLEGE**  
**ERNAKULAM**

*[Handwritten Signature]*

**DIRECTOR**





**Kerala Institute of Local Administration**  
Mulamkunnathukavu P.O, Thrissur - 680 581

**CERTIFICATE**

Certified that Shri. / Smt ..... *Rehana P.R.* .....

..... *Student, BA Economics (Honours), Maharaja's College, Ernakulam* .....

*participated in the training programme on* .....

**Local Governance Interface (Internship Programme)**

from **04.01.2019** to **17.01.2019** ..... *at KILA*



*[Signature]*  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM

**DIRECTOR**





You

7 December, 20:21



**Kerala Institute of Local Administration**  
Mulamkunnathukavu P.O, Thrissur - 680 581

### CERTIFICATE

*Certified that Shri. / Smt. .... Rahana Subair .....*

*..... Student: BA Economics (Honours), Maharaja's College, Ernakulam*

*participated in the training programme on .....*

*..... Local Governance Interface (Internship Programme)*

*from 04.01.2019 to 17.01.2019 at KILA*



**DIRECTOR**

*[Handwritten signature]*  
**GRADE PRINCIPAL**  
**MARATHA COLLEGE**  
**ERNAKULAM**







**Kerala Institute of Local Administration**  
Mulamkunnathukavu P.O, Thrissur - 680 581

**CERTIFICATE**

Certified that Shri. / Smt ..... *Shilpa K.B.* .....

..... *Student, BA Economics (Honours), Maharaja's College, Ernakulam* .....

*participated in the training programme on* .....

**Local Governance Interface (Internship Programme)**

from **04.01.2019** to **17.01.2019**

at **KILA**



SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM

**DIRECTOR**





Kerala Institute of Local Administration  
Mulamkunnathukavu P.O, Thrissur - 680 581

### CERTIFICATE

*Certified that Shri. / Smt ..... Shilpa.M.G.....*

*.....Student,BA Economics(Honours),Maharaja's College, Ernakulam*

*participated in the training programme on .....*

*.....Local Governance Interface (Internship Programme).....*

*from .....04.01.2019.....to .....17.01.2019.....at KILA*



*[Signature]*  
DIRECTOR



*[Signature]*  
GRADE PRINCIPAL  
MAHARAJA'S COLL  
ERNAKULAM





**Kerala Institute of Local Administration**  
Mulamkunnathukavu P.O, Thrissur - 680 581

**CERTIFICATE**

Certified that Shri. / Smt ..... *Sneha S.* .....

..... *Student, BA Economics(Honours), Maharaja's College, Ernakulam*

*participated in the training programme on* .....

**Local Governance Interface (Internship Programme)**

from ..... *04.01.2019* ..... to ..... *17.01.2019* ..... at **KILA**



**DIRECTOR**

*[Signature]*  
**SPECIAL GRADE PRINCIPAL**  
**MAHARAJA'S COLLEGE**  
**ERNAKULAM**





**Kerala Institute of Local Administration**  
Mulamkunnathukavu P.O, Thrissur - 680 581

**CERTIFICATE**

*Certified that Shri. / Smt ..... Sree Lakshmi V. J. ....*

*..... Student, BA Economics (Honours), Maharaja's College, Ernakulam*

*participated in the training programme on .....*

*Local Governance Interface (Internship Programme)*

*from 04.01.2019 to 17.01.2019 at KILA*



**DIRECTOR**

*SPECIAL OFFICER*  
*MADRAS*  
*ERNAKULAM*



**PROJECT COMPLETION CERTIFICATE  
(FOR ASPIRE SCHOLARSHIP - 2017-18)**

This is to certify that Sri/Smt. SAVITHA SAJAN PG student of MAHARAJAS COLLEGE, ERNAKULAM affiliated to St. Peter's College, Kolenchery has successfully completed his/her Aspire Scholarship Project/Internship entitled Application of Bioglyphic on Removal of Chromium Heavy metal from water within the stipulated month(s) from April to May under the guidance of Prof/Dr. Manju M.R of St. Peter's College, Kolenchery institution

**DR. REJI M.A.**  
Name & Designation  
**PRINCIPAL**  
**St. Peter's College, Kolenchery**  
(Head of the Host Institution)

Name & Designation  
(Guide of Host Institution)



(Principal/HOD/Institution)  
**Dr. REJI M.A.**  
**PRINCIPAL**  
**St. Peter's College, Kolenchery**

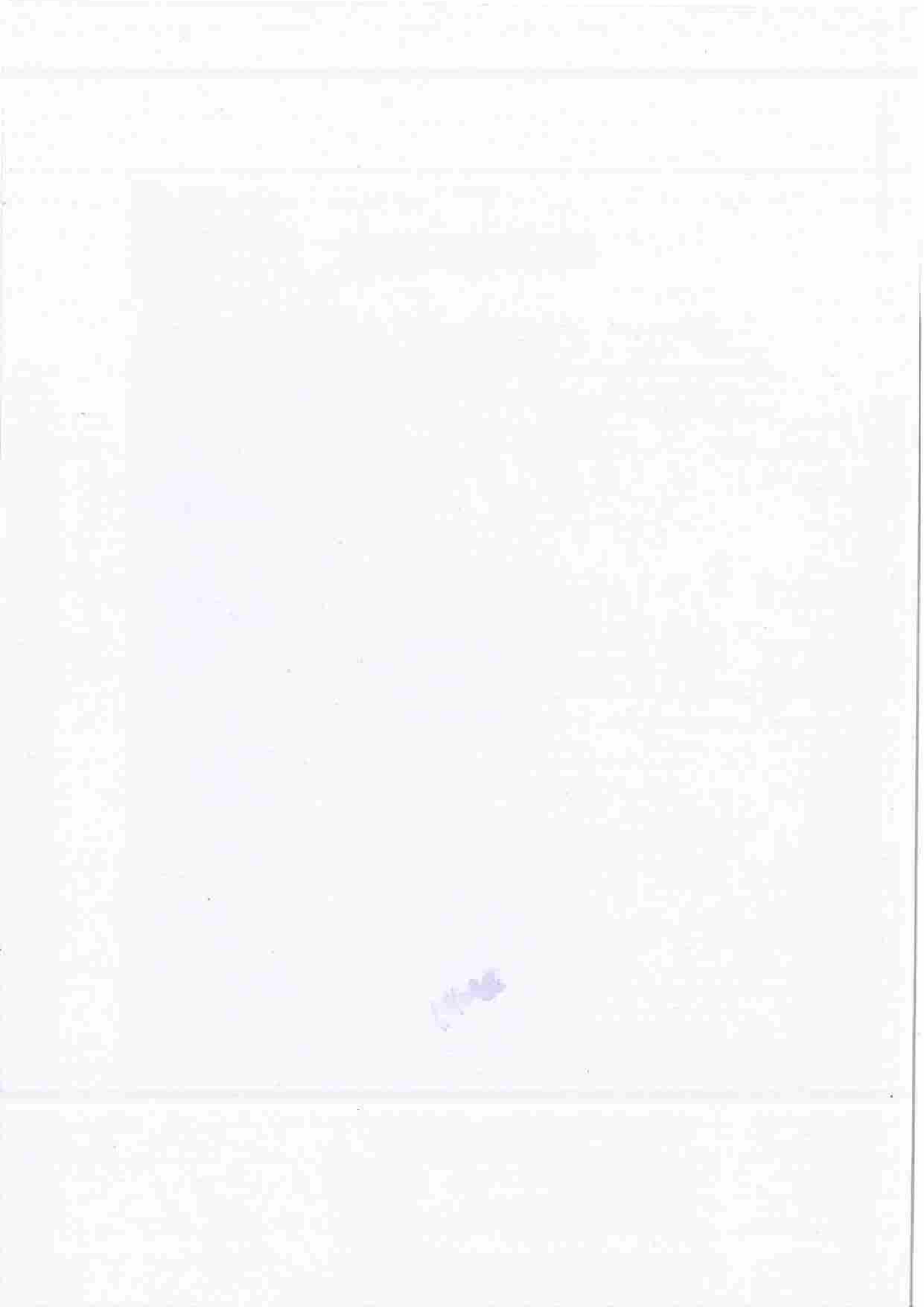
Encl 1) Project Report

2) Attendance certificate from parent institution (as per notification dated...)



**SPECIAL GRADE PRINCIPAL**  
**MAHARAJA'S COLLEGE**  
**ERNAKULAM**





**MEMO**

Sub : Coll.Edu.Aspire Scholarship-Selected Student-relieving Certificate-reg

Ref: .....S1/100568/18...Dated...05/03/2018.....

You are selected for the Aspire Scholarship for the year 2017-18 based on your application and the Institution selected for doing the Project/Internship (St. Teresa s College, Kochi). you are requested to get relieved from your parent Department/Institution (MAHARAJAS COLLEGE, ERNAKULAM) within three days of receipt of this Memo/SMS. After joining the host institution, joining report in the prescribed format appended/enclosed should be forwarded to the Director of Collegiate Education within 7 days of joining.

DIRECTOR OF COLLEGIATE EDUCATION

(Sd/-)

Name : NEETHU . P. C

Date : 13/04/2018

Copy to : HOD of Parent Institution

HOD of Host Institution



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



Appendix II

**PROJECT COMPLETION CERTIFICATE  
(FOR ASPIRE SCHOLARSHIP - 2017-18)**

The Government of Kerala, through the Department of Higher Education, has allocated to **MAHARAJA'S COLLEGE, ERNAKULAM**, affiliated to **MAHARAJA'S COLLEGE, ERNAKULAM**, has successfully completed the Aspire Scholarship Project under the title **Screening on the medicinal plants in a natural landscape** within the stipulated period from 15.04.2017 to 15.04.2018 under the guidance of **Dr. D. SHEILA, Deputy Director of St. Teresa's College, Kechi** institution.



*[Signature]*  
Name: **Dr. D. SHEILA**  
Designation: **Deputy Director**  
Institution: **St. Teresa's College, Kechi**

*[Signature]*  
Name: **Dr. P. S. S. S. S.**  
Designation: **Deputy Director**  
Institution: **St. Teresa's College, Kechi**



Name & Designation:  
Name: **Dr. D. SHEILA**  
Designation: **Associate Professor & Research Coordinator**  
Institution: **St. Teresa's College, Ernakulam**

Name: **Dr. P. S. S. S. S.**  
Designation: **Associate Professor**  
Institution: **St. Teresa's College, Ernakulam**

Enclosed Project Report  
(Wherever applicable from parent institution as per collection sheet)



*[Signature]*  
**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM**

**MEMO**

Sub : Coll.Edu.Aspire Scholarship-Selected Student-relieving Certificate-reg

Ref: .....S1/100568/18...Dated...05/03/2018.....

You are selected for the Aspire Scholarship for the year 2017-18 based on your application and the Institution selected for doing the Project/Internship (St. Teresa s College, Kochi). you are requested to get relieved from your parent Department/Institution (MAHARAJAS COLLEGE, ERNAKULAM) within three days of receipt of this Memo/SMS. After joining the host institution, joining report in the prescribed format appended/enclosed should be forwarded to the Director of Collegiate Education within 7 days of joining.

DIRECTOR OF COLLEGIATE EDUCATION


(Sd/-)

Name : SWANILA N S

Date : 31/05/2018

Copy to : HOD of Parent Institution  
HOD of Host Institution



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



TABLE

TABLE I. *Properties of the various materials used in the experiments.*

TABLE II. *Properties of the various materials used in the experiments.*

TABLE III. *Properties of the various materials used in the experiments.*

TABLE IV. *Properties of the various materials used in the experiments.*

TABLE V. *Properties of the various materials used in the experiments.*

TABLE VI. *Properties of the various materials used in the experiments.*

TABLE VII. *Properties of the various materials used in the experiments.*

TABLE VIII. *Properties of the various materials used in the experiments.*

TABLE IX. *Properties of the various materials used in the experiments.*

TABLE X. *Properties of the various materials used in the experiments.*

Appendix-II

PROJECT COMPLETION CERTIFICATE

(FOR ASPIRE SCHOLARSHIP - 2017-18)

This is to certify that Sri/Smt. AMRUTHA P.A student of MAHARAJA'S COLLEGE affiliated to MALINIAR has successfully completed his/her Aspire Scholarship Project/Internship entitled DIVERSITY OF LICHEN IN KORATIVI GRAMA, PANCHAYAM, THIRISSUR within the stipulated month(s) from 13-4-2018 to 13-5-2018 under the guidance of Prof/Dr. ANTO.P.V of our (St. Thomas college) institution.

  
Signature

Name & Designation  
DR. C.D. Varghese  
(Head of the Host Institution)

Associate Professor  
Dept. of Botany  
St. Thomas College  
Name & Designation

(Guide of Host Institution)

(Office Seal)



**DR. ANTO P.V., Ph.D**  
Assistant Professor  
Department of Botany  
St. Thomas College  
Thirissur - 689 001



(Principal/HOD/Institution)

Dr. Ignatius Antony  
Principal  
St. Thomas College  
(Autonomous)  
Thirissur - 689 001

Encl:1) Project Report

2) Attendance certificate from parent institution (as per notification dated.....)

IT Services: National Informatics Center (NIC), Kerala Page 1/(nb) Printed On: 29/03/2018 21:57



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM







दि फर्टिलाइजर्स एण्ड केमिकल्स ट्रावन्कोर लिमिटेड  
 THE FERTILISERS AND CHEMICALS TRAVANCORE LIMITED  
 (एन एम एल का कर्ता) (A Government of India Enterprise)

शिक्षण केंद्र / TRAINING CENTRE  
 मुख्यालय / Head Office  
 कोयंबटूर / Coimbatore - 435 501

दूरभाष / Phone : 0944 - 2567563, 2090750, 2559021,  
 2567403, 2567200, 2567407, 2567424, 2057795  
 ई-मेल / Email : trnkc@factml.com

DGM (TRG)-CERT-PW/578/2016

29.11.2016

**CERTIFICATE**

Certified that Ms. SHEETHAL T S, BSc(Environment and Water Management Course) student of Maharajas College, Ernakulam, has successfully completed her Project Work Titled "EFFLUENT TREATMENT & ITS ANALYSIS, in FACT Ltd., during the period of 21<sup>st</sup> November 2016 to 29<sup>th</sup> November 2016.

*M. Gunasekaran*  
 M. Gunasekaran  
 Sr. Manager (Trg)



मुख्यालय / Head Office  
 कोयंबटूर / Coimbatore

*thw*  
 SPECIAL GRADE PRINCIPAL  
 MAHARAJA'S COLLEGE  
 ERNAKULAM





दि फर्टिलाइजर्स एण्ड केमिकल्स ट्रावन्कोर लिमिटेड  
 THE FERTILISERS AND CHEMICALS TRAVANCORE LIMITED  
 (कर्म मन्त्रालय द्वारा प्रमाणित) (A Government of India Enterprise)

प्रशिक्षण केंद्र / TRAINING CENTRE  
 एलापूर / Head Office  
 उद्योगमंडल / Udyogamandal - 683 591

दूरभाष / Phone : 0484 - 2567583, 2566760, 2559621,  
 2567423, 2567360, 2567467, 2567424, 2567798  
 ई-मेल / Email : mdc@facttd.com

DGM (TRG)-CERT-PW/580/2016

29.11.2016

**CERTIFICATE**

Certified that Mr. BINSHAD V H, BSc( Environment and Water Management Course) student of Maharajas College, Ernakulam. has successfully completed his Project Work Titled "EFFLUENT TREATMENT & ITS ANALYSIS, in FACT Ltd., during the period of 21<sup>st</sup> November 2016 to 29<sup>th</sup> November 2016.

*M. Gunasekaran*  
 M. Gunasekaran  
 Sr. Manager (Trg)



पंजीकृत कार्यालय : एलापूर, उद्योगमंडल  
 Regd. Office: Elloor, Udyogamandal



Shot on OnePlus  
 Powered by Dual Camera



*[Handwritten Signature]*  
 SPECIAL GRADE PF  
 MAHARAJA'S COLLEGE  
 ERNAKULAM





हिन्दुस्तान इन्सेक्टिसाइड्स लिमिटेड  
(भारत सरकार का उद्यम)  
**HINDUSTAN INSECTICIDES LIMITED**



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सी आई एन CIN : U24211DL1954GOI002377

उद्योगमण्डल UDYOGAMANDAL - 683 501  
कोची, केरल, भारत KOCHI, KERALA, INDIA  
फोन PHONE : 0484-2545121 to 2545123  
फैक्स FAX : 0484 -2545464  
ई-मेल E-MAIL : hiludi@dataone.in



हिंदी में या व्यवहार करते देश का लोग पढ़ए ।  
ए व कार्यालय में, हिन्दी में प्रान एकी प्र स्ताना है ।

PE-4/185

31.08.2016

CERTIFICATE

*This is to certify that Ms Haritha N P, Reg No 140011008226, MSc (Pharmaceutical Chemistry) student of Maharajas College, Ernakulam has undertaken Project work on the topic "Study of Removal of PP'DDT and Dicofol from Waste water by Advanced Oxidation Process and Conventional Treatments" in our Company from 16.01.2016 to 15.04.2016 as a partial fulfillment for the award of MSc.*

*We wish her all success.*



*[Signature]*  
**DY. MANAGER (HR & ADMN)**

**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM**



उद्योगमण्डल कार्यालय कोची-6, पुस्तकालय बिल्डिंग, उद्योगमण्डल, 7 मलाई रोड, कोची-683501  
Regd Office: Cora 6, 2nd floor, SCDFE Complex, 7 Lady Road, New Delhi - 110003  
फैक्स No: 011-25452336 ई-मेल E-mail: hiludi@govt.वेबसाइट: Website: www.hiludi.com  
उद्योग उत्पादन यूनिट: इलाहाबाद, बलियाँ (Uttar Pradesh) Unit: Raebareilly, Bahraich



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KERALA UNIVERSITY OF FISHERIES & OCEAN STUDIES

കേരള ഫിഷറീസ്-സമുദ്രപഠന സർവ്വകലാശാല

PANANGAD P.O., KOCHI 682 506, KERALA, INDIA

☎ 0484-2703782, 2700098; FAX: 91-484-2700337; e-mail: [ufo@panangad.kufos.ac.in](mailto:ufo@panangad.kufos.ac.in) website: [www.kufos.ac.in](http://www.kufos.ac.in)

## CERTIFICATE

This is to certify that the project work entitled "ADSORPTION OF CHROMIUM FROM AQUEOUS SOLUTIONS USING CHITOSAN-VERIFICATION OF FREUNDLICH ADSORPTION ISOTHERM" is an authentic record of the project work carried out by **Ms. ELSY K S** under my supervision and guidance at the Department of Fishery Hydrography, Kerala University of Fisheries and Ocean Studies, Panangad, in partial fulfillment of the requirements for the award of degree of Master of Science in Chemistry under the faculty of science of Maharaja's college, University of Mahatma Gandhi, during the academic year 2015-2017.

Panangad

23/05/2017

Dr. Anu Gopinath

(supervising Guide)

Assistant Professor in

Chemical Oceanography

Dept of Fishery Hydrography

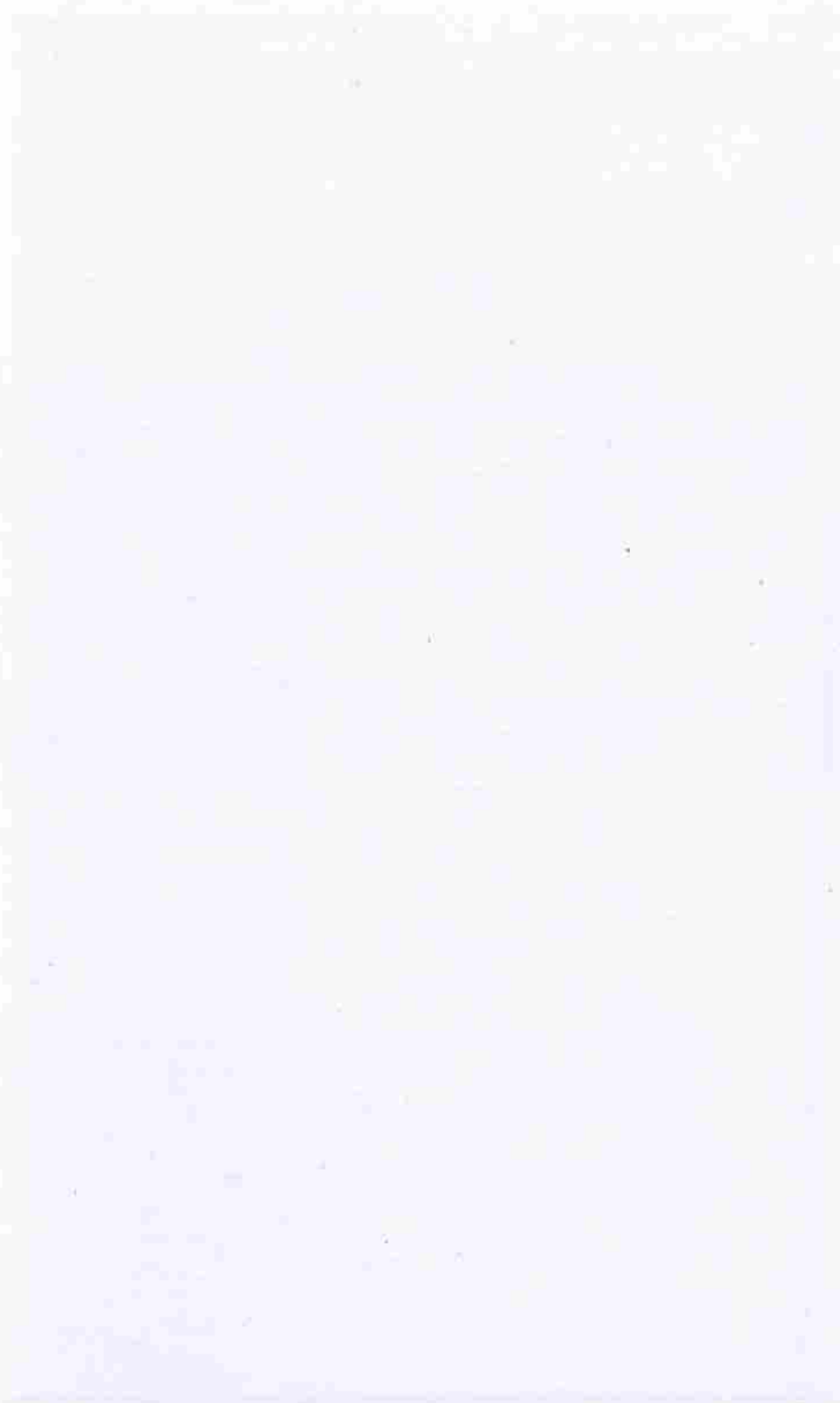
KUFOS, Kochi

Dr. ANU GOPINATH  
Assistant Professor in Chemical Oceanography  
Dept. of Fishery Hydrography  
Kerala University of Fisheries & Ocean Studies  
Panangad, Kochi - 682506



SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



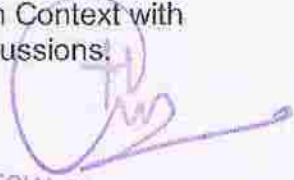


Very truly yours,  
 John Smith

Dr. Anna Abraham Pachayil  
has completed the  
**FLAIR INTERNATIONAL  
INTERNSHIPS** programme  
with the University of Derby during  
February-March 2016

At the end of the four week internship, the faculty members (interns) would have completed the following:

1. Observation of the teaching sessions
2. Preparation of a report of a good practice in learning-teaching and research (based on involvement/interactions with the mentor) being followed in the host University (UK University) that can be adopted in the home institution.
3. Presentation of the best practices report before the mentor/peer group representatives and Programme Director FLAIR in the host University.
4. Sharing of academic experiences of the intern in the Indian Context with the mentor/peer group in meetings, seminars or informal discussions.



SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM

Head of Department of Professional Studies: Fiona Shelton



SECRET

MEMORANDUM FOR THE SECRETARY OF DEFENSE

DATE: 10/15/64

SUBJECT: [REDACTED]

1. [REDACTED]

2. [REDACTED]

3. [REDACTED]

4. [REDACTED]

5. [REDACTED]

6. [REDACTED]

7. [REDACTED]

8. [REDACTED]

9. [REDACTED]

## **CERTIFICATE**

This is to certify that the project work entitled "FUNCTIONALISATION OF MULTIWALLED CARBON NANOTUBES AND IT'S COMPOSITES WITH NATURAL RUBBER" is an authentic record of original work done by **ATHIRA A.S** under my supervision and guidance in the partial fulfillment of the requirement for the award of the degree of MSc. Chemistry of Mahatma Gandhi University. I further certify that no part of this dissertation has been submitted earlier for the award of any degree or assistantship of any other university or institution.

**Dr. RANI JOSEPH**

(Emeritus professor, PS&RT, CUSAT)

**Prof. Neena Jiby** (CO-GUIDE)

(ASST.PROFESSOR ,VICTORIA COLLEGE, PALAKAD )



SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



# **CERTIFICATE**

*This is to certify that the report entitled*  
**“FUNCTIONALISATION OF MULTIWALLED  
CARBON NANOTUBES AND IT'S COMPOSITES  
WITH NATURAL RUBBER”**

has been submitted by

***ATHIRA A.S***

Reg.No:***120011007963***

In partial fulfillment of the award for the degree in  
**MASTER OF SCIENCE IN APPLIED  
CHEMISTRY  
OF  
MAHATMA GANDHI UNIVERSITY  
during the academic year 2012-2014.**

**Head of the Department**

Submitted for the examination held on:

Examiners:

1) .....

2) .....

## ***CERTIFICATE***

This is to certify that the project work entitled "FUNCTIONALISATION OF MULTIWALLED CARBON NANOTUBES AND IT'S COMPOSITES WITH NATURAL RUBBER" is an authentic record of original work done by **JIYA JOSE** under my supervision and guidance in the partial fulfillment of the requirement for the award of the degree of MSc. Chemistry of Mahatma Gandhi University. I further certify that no part of this dissertation has been submitted earlier for the award of any degree or assistantship of any other university or institution.

**Dr. RANI JOSEPH**

(Emeritus professor, PS&RT, CUSAT)

**Prof. Neena Jiby** (CO-GUIDE)

(ASST.PROFESSOR ,VICTORIA COLLEGE, PALAKAD )



SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



# ***CERTIFICATE***

*This is to certify that the report entitled*  
**“FUNCTIONALISATION OF MULTIWALLED  
CARBON NANOTUBES AND IT'S COMPOSITES  
WITH NATURAL RUBBER”**

has been submitted by

***JIYA JOSE***

Reg.No:*120011007673*

In partial fulfillment of the award for the degree in  
**MASTER OF SCIENCE IN ANALYTICAL  
CHEMISTRY**

**OF**

**MAHATMA GANDHI UNIVERSITY**  
*during the academic year 2012-2014.*

**Head of the Department**

Submitted for the examination held on:

Examiners:

1) .....

2) .....



हिन्दुस्तान इन्सेक्टिसाइड्स लिमिटेड

(भारत सरकार का उद्यम)

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समृद्धि हेतु सुरक्षा

उद्योगमंडल UDYOGAMANDAL - 683 501

कोची, केरल, भारत Kochi, Kerala, India.

फोन Phone : 0484-2545121 to 2545123

फैक्स Fax : 0484-2545464

ई-मेल E-mail : hil@dataone.in



हमेशा हिन्दी में पत्र व्यवहार करके देश सा गौरव बढाए  
इस कार्यालय में हिन्दी में प्राप्त पत्रों का स्वागत है

## CERTIFICATE

This is to certify that Ms **RESHMA AMBROSE** (Reg.No 120011008155), has worked on the project entitled "**PURIFICATION AND CRYSTALLISATION OF DICOFOL**" at the R&D department, HIL for the partial fulfilment of the degree of **MASTER OF SCIENCE IN PHARMACEUTICAL CHEMISTRY**, Department of Chemistry, Maharajas College Ernakulam

Date: 01/10/2014

Dr. V. Babu  
Development chemist  
R&D Department. HIL  
Udyogamandal, Ernakulam



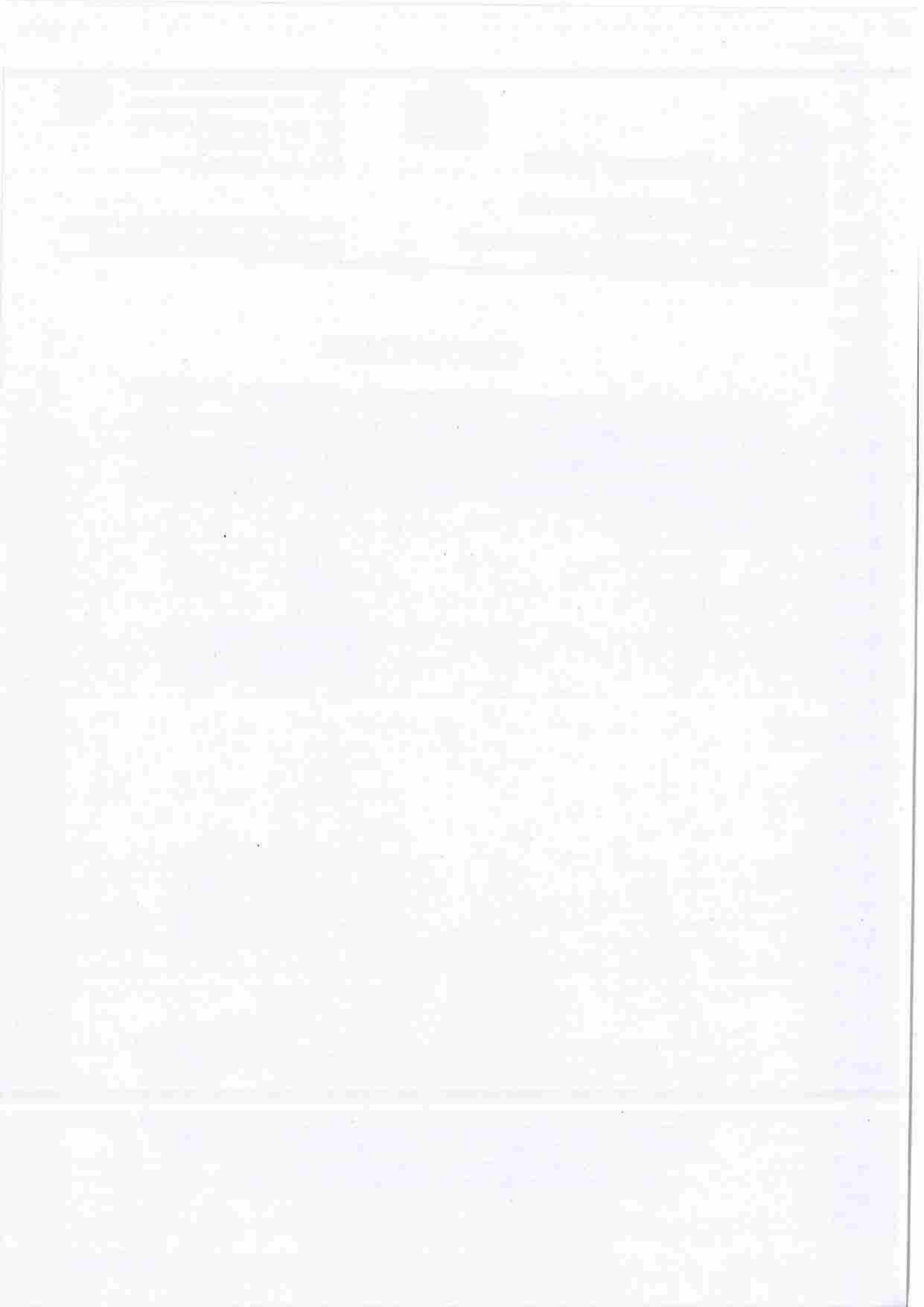
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ERNAKULAM

पंजीकृत कार्यालय : स्कोप कॉम्प्लेक्स, कोर 6-, द्वितीय मंजिल, 7 लोडी रोड, नई दिल्ली - 110003  
Regd. Office : SCOPE Complex, Core-6, 2nd Floor, 7 Lodi Road, New Delhi - 110003

फैक्स Fax : 01124362116, ईमेल E-mail : hq@hil.gov.in, वेब Web : www.hil.gov.in

अन्य उत्पादन यूनिट : रसायनी, बठिंडा Other Production units : Rasayani, Bathinda







## SMITHA MADANAN

has attended and completed a range activities relating to the FLAIR programme, from 11<sup>th</sup> February to 6<sup>th</sup> March 2015

### Including:

- Classroom observations in their subject areas
- Meetings with Academic staff and Directors of Research
- Workshops relating to:
  - Introduction to UK Educational context and the Higher Education Landscape
  - Planning for claiming Associate Fellowship of the HEA
  - Academic Staff Development in the UK
  - Intercultural Communication
  - Assessment Mapping
- Work-shadowing with Dr Debbie Holley, Dr Mike Hobbs and Dr Paulette Luff
- Networking sessions with staff and students across all Faculties
- Learning & Teaching in Practice with Dr Jaki Lilly

*Simon Pratt-Adams*  
Dr Simon Pratt-Adams  
Deputy Dean International & External Income  
Faculty of Health, Social Care & Education



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This is not evidence of an Anglia Ruskin University Award or Qualification





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भारतीय प्रबंध संस्थान वस्त्रपुर, अहमदाबाद 380 015  
 INDIAN INSTITUTE OF MANAGEMENT - Vastrapur, Ahmedabad 380 015

INTERNATIONAL COLLABORATIVE RESEARCH

CERTIFICATE OF PARTICIPATION

certified that Mrs. Neena Merum faculty of Commerce Department Maharaja's College Ernakulam has participated in data collection with support of students for the *Field Research Project on the Transnational Recruitment Industry in the Asia GCC Corridor*. The involvement was part of the study conducted by International Organization for Migration (IOM) Kuwait office and executed by Indian Institute of Management, Ahmedabad (IIM-A) and Marthoma College of Management and Technology (MCMCT) Palakkad.

*R. K. Varkey*

Dr. R. K. Varkey  
 Director, Finance Management Area

Ernakulam

Phone: 91 - 79 - 6632 3456 • Fax: 91 - 79 - 6632 6096, 2630 6496 • Website: <http://www.iimahd.ernet.in>



*[Handwritten signature]*

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INDIAN INSTITUTE OF MANAGEMENT Vastrapur, Ahmedabad 380 015

INTERNATIONAL COLLABORATIVE RESEARCH

CERTIFICATE OF PARTICIPATION

PROF. DR. VINETH K.M. Faculty of Commerce Department, Maharaja's College, Ernakulam, Kerala has participated as a field college coordinator for data collection with support of students for the *Field Research Project on the Transnational Recruitment Industry in the Asia GCC Corridor*. The involvement was part of the study sponsored by International Organization for Migration (IOM) Kuwait office and executed by Indian Institute of Management Ahmedabad (IIMA) and Marthoma College of Management and Technology (MCMT) Perumbavoor.



Vineth K.M.

Faculty of Commerce Management, Azh

15/05/2016

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Web : www.irtc.org.in, E-mail : irtcpalakkad@gmail.com

## CERTIFICATE


This is to certify that **Kum. Annie Baby**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Eranakulam has successfully completed the Project work titled "Quantification of Methane from Domestic Biogas Plant and Detection of Coliform Bacteria from Plant Slurry" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Mahesh.E**, Scientific Assistant during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016



  
Prof. B.M. Musthafa  
Research Co-ordinator





**QUANTIFICATION OF METHANE FROM DOMESTIC BIOGAS PLANT  
AND DETECTION OF COLIFORM BACTERIA FROM PLANT SLURRY**

**Project Report**

Submitted in Partial Fulfilment of the  
Requirements for the Degree of

**Bachelor of Science  
In  
Chemistry (Environment and Water Management)**

By

**ANNIE BABY**

**Reg No:130021028736**



**DEPARTMENT OF CHEMISTRY  
MAHARAJA'S COLLEGE  
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## CERTIFICATE

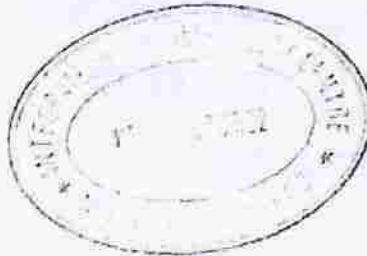
This is to certify that Kum.Arya Sukesan, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Eranakulam has successfully completed the Project work titled "Quantification of Methane from Domestic Biogas Plant and Detection of Coliform Bacteria from Plant Slurry" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of Mahesh.E, Scientific Assistant during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur

14.01.2016



  
Prof.B.M.Musthafa

Research Co-ordinator



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**QUANTIFICATION OF METHANE FROM DOMESTIC BIOGAS PLANT  
AND DETECTION OF COLIFORM BACTERIA FROM PLANT SLURRY**

**Project Report**

Submitted in Partial Fulfilment of the  
Requirements for the Degree of

**Bachelor of Science  
In  
Chemistry (Environment and Water Management)**

By

**ARYA SUKESAN**

Reg No:130021028738



**DEPARTMENT OF CHEMISTRY  
MAHARAJA'S COLLEGE  
ERNAKULAM**

**MAY 2016**



  
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## CERTIFICATE


This is to certify that **Kum.Aryamol Santhosh**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Eranakulam has successfully completed the Project work titled "Quantification of Methane from Domestic Biogas Plant and Detection of Coliform Bacteria from Plant Slurry" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Mahesh.E**, Scientific Assistant during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

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Mundur  
14.01.2016



  
Prof.B.M.Musthafa  
Research Co-ordinator

  
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Web : www.irtc.org.in E-mail : irtcpalakkad@gmail.com

### CERTIFICATE

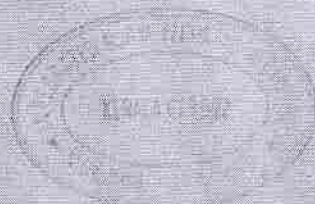
This is to certify that **Kum. Akhila Mol.M, B.Sc. Chemistry (Environment and Water Management)** Student of **Maharaja's College Ernakulam**, has successfully completed the Project work titled **"Quantification of Methane from Domestic Biogas Plant and Detection of Coliform Bacteria from Plant Slurry"** at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Mahesh.E, Scientific Assistant** during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur

14/01/2016



  
Prof. B.M. Musihafa

Research Co-ordinator



  
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### CERTIFICATE

This is to certify that Kurn.Vijayalakshmi.T.S, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam has successfully completed the Project work titled "STUDY OF NPK VALUES OF 'READY TO USE' BIOFERTILIZER SLURRY FROM PIGFARM BIOGAS PLANT AND SOIL CHARACTERISTICS OF THE STUDY AREA" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of Mahesh.E, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.


I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016

  
Prof.B.M.Musthafa  
Research Co-ordinator



  
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Web : www.irtc.org.in, E-mail : irtopalakkad@gmail.com

### CERTIFICATE

This is to certify that **Kum.Hareeshma Rajeev**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam has successfully completed the Project work titled "**An Analysis and Assessment of Nutritive Value of Vermi and Windrow Compost**" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Preethamol.P.K.**, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

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Mundur


14.01.2016



  
Prof.B.M.Musthafa

Research Co-ordinator



  
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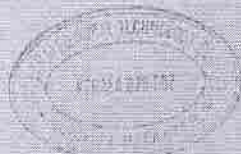
### CERTIFICATE


This is to certify that **Kum. Amitha Unnikrishnan, B.Sc.** Chemistry (Environment and Water Management) Student of **Maharaja's College, Ernakulam** has successfully completed the Project work titled "**Formulation and Analysis of Home Remedy Herbal Soap**" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Sujith S. Nair, Scientific Assistant**, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

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Mundur  
14.01.2016



  
Prof. B.M. Musthafa  
Research Co-ordinator

  
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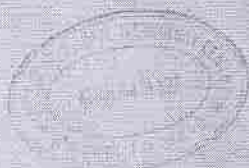
### CERTIFICATE

This is to certify that Mr. Naveen.S.Lal, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam has successfully completed the Project work titled "To Study the Performance of Air Earth Heat Exchanger" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of Sreejith.K.S. Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from MGU University.

I further certify that he had completed all the assigned works and states to our complete satisfaction and had impressed me with his dedication and constant strive for excellence in work.

He bears a good character & conduct.

Mundur  
14.01.2016



  
Prof. B.M. Musthafa  
Research Co-ordinator



  
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### CERTIFICATE

This is to certify that Kum. Shabnas.M.B, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam has successfully completed the Project work titled "Formulation and Analysis of Home Remedy Herbal Soap" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of Supth.S.Nair, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties in our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur

13.01.2016



  
Prof. B.M. Musthafa

Research Co-ordinator

  
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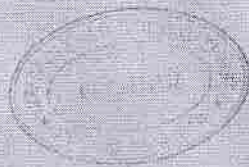
### CERTIFICATE

This is to certify that **Kum.Arya Sukesan, B.Sc. Chemistry** (Environment and Water Management) Student of Maharaja's College, Ernakulam has successfully completed the Project work titled "**Quantification of Methane from Domestic Biogas Plant and Detection of Coliform Bacteria from Plant Slurry**" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Alahesh.E, Scientific Assistant** during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016



  
Prof. B.M. Mustafa  
Research Co-ordinator



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Web: www.irtc.org.in, E-mail: irtcpalakkad@gmail.com

### CERTIFICATE


This is to certify that Kum.VishnuPriya.A.R., B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam has successfully completed the Project work titled "An Analysis and Assessment of Nutritive Value of Vermu and Windrow Compost" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of Preethamol.P.K, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfilment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
(4.01) 2016



  
Prof. H.M. Musthafa  
Research Coordinator

  
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Web : www.irtc.org.in; E-mail : irtc@palakkad@gmail.com

### CERTIFICATE

This is to certify that **Kum. Annie Baby, B.Sc. Chemistry** (Environment and Water Management) Student of **Maharaja's College, Irinjalakulam** has successfully completed the Project work titled "**Quantification of Methane from Domestic Biogas Plant and Detection of Coliform Bacteria from Plant Slurry**" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Mahesh.E., Scientific Assistant** during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from MG University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016



  
Prof. R.M. Musthafa  
Research Co-ordinator



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Web : www.irtc.org.in, E-mail : irtcpalakkad@gmail.com

### CERTIFICATE


This is to certify that **Kum. Vandhana Vinayakan**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam, has successfully completed the Project work titled "**Formulation and Analysis of Home Remedy Herbal Soap**" at Integrated Rural Technology Centre (IRTC), Mundur, Palakkad, under the supervision and guidance of **Sujith S. Nair**, Scientific Assistant, during the period from the month of 8<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016



  
Prof. B.M. Musthafa  
Research Co-ordinator

  
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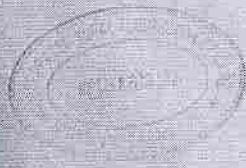
### CERTIFICATE


This is to certify that Mr. Rajul Krishnan, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam has successfully completed the Project work titled "To Study the Performance of Air Earth Heat Exchanger" at Integrated Rural Technology Centre (IRTC) Mundur, Polakkad, under the supervision and guidance of Sreejith, K.S. Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that he had completed all the assigned works and duties to our complete satisfaction and had impressed me with his dedication and constant strive for excellence in work.

He bears a good character & conduct.

Mundur  
14.01.2016



  
Prof. B.M. Musthafa  
Research Coordinator

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0



  
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Web: www.irtc.org.in, E-mail: irtcpalakkad@gmail.com

### CERTIFICATE

This is to certify that **Kum.Meera Purantharan**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam has successfully completed the project work titled "An Analysis and Assessment of Nutritive Value of Vermi and Windrow Compost" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Preethimol.P.K**, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 13<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from MG University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur

14.01.2016



  
Prof. D.M. Musibafa

Research Co-ordinator

  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM





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Web: www.irtc.org.in. E-mail: irtcpalakkad@gmail.com


### CERTIFICATE

This is to certify that **Kum. Ismath G.N.**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam, has successfully completed the Project work titled "**STUDY OF NPK VALUES OF 'READY TO USE' BIOFERTILIZER SLURRY FROM PIGFARM BIOGAS PLANT AND SOIL CHARACTERISTICS OF THE STUDY AREA**" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Maresh E.**, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016, for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016

  
**Prof. B.M. Musthafa**  
Research Co-ordinator



  
**SPECIAL GRADE PRINCIPAL**  
MAHARAJA'S COLLEGE,  
ERNAKULAM

# INTEGRATED RURAL TECHNOLOGY CENTRE (IRTC)

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Web: www.irtc.org.in, E-mail: irtc@palakkad@gmail.com

## CERTIFICATE

This is to certify that **Kum. Ansiya.M.A, B.Sc. Chemistry (Environment and Water Management)** Student of Maharaja's College, Eranakulam has successfully completed the Project work titled **"STUDY OF NPK VALUES OF 'READY TO USE' BIOFERTILIZER SLURRY FROM PIGFARM BIOGAS PLANT AND SOIL CHARACTERISTICS OF THE STUDY AREA"** at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Mahesh.E. Scientific Assistant**, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur

14.01.2016



**Prof.B.M.Mustafa**

Research Co-ordinator



**SPECIAL GRADE PRINCIPAL**  
MAHARAJA'S COLLEGE  
ERANAKULAM



**STUDY OF NPK VALUES OF 'READY TO USE 'BIOFERTILIZER SLURRY FROM  
PIG FARM BIOGAS PLANT AND SOIL CHARACTERISTICS OF THE STUDY AREA**

**Project Report**

**Submitted in Partial Fulfilment of the**

**Requirements for the Degree of**

**Bachelor of Science**

**In**

**Chemistry (Environment and Water Management)**

**By**

**ANSIYA.M.A.**

**RegNo:130021028737**



**DEPARTMENT OF CHEMISTRY**

**MAHARAJA'S COLLEGE**

**ERNAKULAM**

**MAY 2016**



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MAHARAJA'S COLLEGE  
ERNAKULAM**

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Web: www.irtc.org.in, E-mail : irtcpalakkad@gmail.com


## CERTIFICATE

This is to certify that Kum.Vijayalakshmi.T.S, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Ernakulam has successfully completed the Project work titled "STUDY OF NPK VALUES OF 'READY TO USE' BIOFERTILIZER SLURRY FROM PIGFARM BIOGAS PLANT AND SOIL CHARACTERISTICS OF THE STUDY AREA" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of Mahesh.E, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016

  
Prof.B.M.Musthafa  
Research Co-ordinator



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



*STUDY OF NPK VALUES OF 'READY TO USE' BIOFERTILIZER SLURRY FROM  
PIG FARM BIOGAS PLANT AND SOIL CHARACTERISTICS OF THE STUDY AREA*

Project Report

Submitted in Partial Fulfilment of the

Requirements for the Degree of

**Bachelor of Science**

**In**

**Chemistry (Environment and Water Management)**

By

**VIJAYALAKSHMI T S**

**RegNo:130021028758**



**DEPARTMENT OF CHEMISTRY**

**MAHARAJA'S COLLEGE**

**ERNAKULAM**

**MAY 2016**



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Web : www.irtc.org.in, E-mail : irtcpalakkad@gmail.com

## CERTIFICATE

This is to certify that Mr. Naveen.S.Lal, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Eranakulam has successfully completed the Project work titled "To Study the Performance of Air Earth Heat Exchanger" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of Sreejith.K.S, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.


I further certify that he had completed all the assigned works and duties to our complete satisfaction and had impressed me with his dedication and constant strive for excellence in work.

He bears a good character & conduct.

Mundur

14.01.2016



  
Prof. B.M. Musthafa  
Research Co-ordinator

  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



**TO STUDY THE PERFORMANCE OF AIR EARTH HEAT  
EXCHANGER**

**Project Report**

**Submitted in Partial Fulfilment of the**

**Requirements for the Degree of**

**Bachelor of Science**

**In**

**Chemistry (Environment and Water Management)**

**By**

**NAVEEN S LAL**

**REG NO: 130021028749**



**Department of Chemistry**

**Maharaja's College**

**Ernakulam**

**May 2016**



  
**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM**

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Web : www.irtc.org.in, E-mail : irtcpalakkad@gmail.com

## CERTIFICATE


This is to certify that **Kum.Shabnas.M.B**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Eranakulam has successfully completed the Project work titled "Formulation and Analysis of Home Remedy Herbal Soap" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Sujith.S.Nair**, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016



  
Prof.B.M.Musthafa  
Research Co-ordinator



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



**FORMULATION AND ANALYSIS OF HOME  
REMEDY HERBAL SOAP**

**A PROJECT REPORT**

Submitted by

**SHABANAS M .B**

In partial fulfillment for the award of degree

Of

**BACHELOR OF SCIENCE**

In

**CHEMISTRY (ENVIRONMENT & WATER MANAGEMENT)**

**DEPT. OF CHEMISTRY**

**MAHARAJA'S COLLEGE,**

**ERNAKULAM**



**MG UNIVERSITY: KOTTAYAM**

**MARCH 2016**

**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM**



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## CERTIFICATE


This is to certify that **Kum.Vandhana Vinayakan**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Eranakulam has successfully completed the Project work titled "**Formulation and Analysis of Home Remedy Herbal Soap**" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Sujith.S.Nair**, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016



  
Prof.B.M.Musthafa  
Research Co-ordinator



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERANAKULAM



**FORMULATION AND ANALYSIS OF HOME  
REMEDY HERBAL SOAP**

**A PROJECT REPORT**

Submitted by

**VANDHANA VINAYAKAN (130021028756)**

In partial fulfillment for the award of degree

Of

**BACHELOR OF SCIENCE**

In

**CHEMISTRY (ENVIRONMENT & WATER MANAGEMENT)**

**DEPT. OF CHEMISTRY**

**MAHARAJA'S COLLEGE,**

**ERNAKULAM**



**MG UNIVERSITY: KOTTAYAM  
MARCH 2016**

**SPECIAL GRADE PRINCIPAL  
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ERNAKULAM**



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Web: www.irtc.org.in E-mail: irtcpalakkad@gmail.com

## CERTIFICATE

This is to certify that **Kum.Amitha Unnikrishnan, B.Sc.** Chemistry (Environment and Water Management) Student of **Maharaja's College, Ernakulam** has successfully completed the *Project work* titled "**Formulation and Analysis of Home Remedy Herbal Soap**" at **Integrated Rural Technology Centre (IRTC) Mundur, Palakkad**, under the supervision and guidance of **Sujith.S.Nair, Scientific Assistant**, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of **B.Sc. Degree from M.G. University**.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur  
14.01.2016



  
Prof. B.M. Musthafa

Research Co-ordinator

  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



**FORMULATION AND ANALYSIS OF HOME  
REMEDY HERBAL SOAP**

**A PROJECT REPORT**

Submitted by

**AMITHA UNNIKRISHNAN (130021028734)**

In partial fulfillment for the award of degree

Of

**BACHELOR OF SCIENCE**

In

**CHEMISTRY (ENVIRONMENT & WATER MANAGEMENT)**

**DEPT. OF CHEMISTRY**

**MAHARAJAS COLLEGE,**

**ERNAKULAM**



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MARCH 2016**



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## CERTIFICATE

This is to certify that **Kum.Vishnupriya.A.R**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Eranakulam has successfully completed the Project work titled "An Analysis and Assessment of Nutritive Value of Vermi and Windrow Compost" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Preethamol.P.K**, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

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Mundur

14.01.2016



  
Prof.B.M.Musthafa

Research Co-ordinator



SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM



**NUTRITIVE ANALYSIS OF VERMI COMPOST,  
WINDROW AND ORGANIC MANURE**

**A PROJECT REPORT**

Submitted by

**VISHNUPRIYA A .R (130021028760)**

In partial fulfillment for the award of degree

Of

**BACHELOR OF SCIENCE**

In

**CHEMISTRY (ENVIRONMENT & WATER MANAGEMENT)**

**DEPT. OF CHEMISTRY**

**MAHARAJAS COLLEGE,**

**ERNAKULAM**



**MG UNIVERSITY: KOTTAYAM**

**MARCH 2016**

*Valid  
Kul  
Madhum Dominic c.o.  
J.H. College, Kerala.*

*Handwritten signature in purple ink.*

**SPECIAL GRADE PRINCIPAL  
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## CERTIFICATE

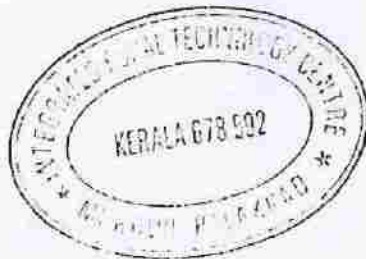
This is to certify that **Kum.Shabnas.M.B**, B.Sc. Chemistry (Environment and Water Management) Student of Maharaja's College, Eranakulam has successfully completed the Project work titled "**Formulation and Analysis of Home Remedy Herbal Soap**" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Sujith.S.Nair**, Scientific Assistant, during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G. University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

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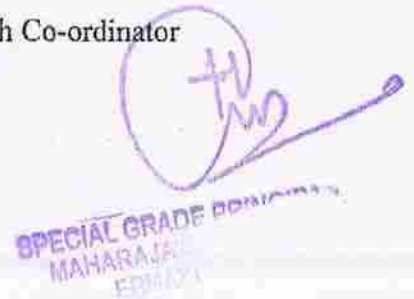
Mundur

14.01.2016



  
Prof.B.M.Musthafa

Research Co-ordinator





**FORMULATION AND ANALYSIS OF HOME  
REMEDY HERBAL SOAP**

**A PROJECT REPORT**

Submitted by

**SHABANAS M .B**

In partial fulfillment for the award of degree

Of

**BACHELOR OF SCIENCE**

In

**CHEMISTRY (ENVIRONMENT & WATER MANAGEMENT)**

**DEPT. OF CHEMISTRY**

**MAHARAJA'S COLLEGE,**

**ERNAKULAM**



**MG UNIVERSITY: KOTTAYAM**

**MARCH 2016**

*Checked  
Mia  
M. John Dominic  
St. College, Perum*



*[Signature]*  
**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE,  
ERNAKULAM**

# INTEGRATED RURAL TECHNOLOGY CENTRE (IRTC)

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Web : www.irtc.org.in, E-mail : irtcpalakkad@gmail.com

## CERTIFICATE

This is to certify that **Kum. Akhila Mol.M, B.Sc. Chemistry** (Environment and Water Management) Student of Maharaja's College Eranakulam, has successfully completed the Project work titled "Quantification of Methane from Domestic Biogas Plant and Detection of Coliform Bacteria from Plant Slurry" at Integrated Rural Technology Centre (IRTC) Mundur, Palakkad, under the supervision and guidance of **Mahesh.E, Scientific Assistant** during the period from the month of 5<sup>th</sup> January 2016 to 14<sup>th</sup> January 2016 for the partial fulfillment of the requirements for the award of B.Sc. Degree from M.G University.

I further certify that she had completed all the assigned works and duties to our complete satisfaction and had impressed me with her dedication and constant strive for excellence in work.

She bears a good character & conduct.

Mundur

14.01.2016



  
Prof. B.M. Musthafa

Research Co-ordinator



  
SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERANAKULAM



**QUANTIFICATION OF METHANE FROM DOMESTIC BIOGAS PLANT  
AND DETECTION OF COLIFORM BACTERIA FROM PLANT SLURRY**

**Project Report**

Submitted in Partial Fulfilment of the  
Requirements for the Degree of

**Bachelor of Science  
In  
Chemistry (Environment and Water Management)**

By

**AKHILA MOL M**

**Reg No:130021028732**



**DEPARTMENT OF CHEMISTRY  
MAHARAJA'S COLLEGE  
ERNAKULAM**

**MAY 2016**



**SPECIAL GRADE PRINCIPAL  
MAHARAJA'S COLLEGE  
ERNAKULAM**



May 28, 2015

United States Consulate General  
220, Anna Salai Rd, Gemini Circle,  
Chennai, Tamil Nadu 600044, INDIA

RE: Visa for **JIJO PULICKIYIL ULAHANNAN** [Passport No. **H6527964**]

Dear Consular,

This certifies that **JIJO PULICKIYIL ULAHANNAN** has been invited to attend the 2015 TED Fellows Retreat taking place August 26 to 30, 2015 at the Asilomar Conference Grounds in Pacific Grove, California.

**JIJO PULICKIYIL ULAHANNAN** is a physicist specializing in nanophotonic systems, quantum optics, theoretical and computational physics. He also works as an internal mentor, career advisor, and coordinator of the college master computing facility. Trained in parallel computing he serves as a resource person for teacher training on presentations and technology enabled teaching and learning.

**About TED** - TED is a renowned four-day annual event where the world's leading thinkers and doers share what they are most passionate about. TED stands for Technology, Entertainment, Design — three broad areas shaping our future. Today TED showcases ideas that matter in any discipline. Past speakers have included former President Bill Clinton, Bill Gates, Secretary of State Hilary Rodham Clinton, Jane Goodall, and Bono.

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Please assist **JIJO PULICKIYIL ULAHANNAN** in securing a visa for the stipulated period. Should you have any questions please feel free to contact me at [shoham@ted.com](mailto:shoham@ted.com).

Best regards,

Shoham Arad  
TED Fellows Deputy Director

Chris Anderson  
TED Curator



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ERNAKULAM



