

## CERTIFICATE

This is to certify that the research work described in this project report entitled "Preparation of Vermicomposting and The Plants growth rate in it", at Machilipatnam, Andhra Pradesh India is the outcome of work carried out by Miss. Munagoti Bhuvanewari Msc Zoology Roll no : Y21ZOO101015 project student, University college of Arts and Science, Krishna University, Rudravaram, Machilipatnam, Andhra Pradesh, India.

Place : Machilipatnam

Date :

*Naveena Lavanya Latha*  
*20/9/2023*

*J. Naveena Lavanya Latha* 20/9/2023  
**Dr. J.Naveena Lavanya Latha**

(Project advisor)

*[Signature]*  
**Head of the Department**

**HEAD**  
DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003, A.P

External Examiner

## CERTIFICATE

This is to certify that the research work described in this project report entitled "*A Study On Culturing of Vermicompost & Growth Development of Plant with normal soil & Fertile Soil at Machilipatnam, Andhra Pradesh India*" is the outcome of work carried out by *Mr.Dileep Kumar Sadangi* Msc Zoology Roll no: Y21ZOO101018 project student, University college of Arts and Science, Krishna University, Rudravaram, Machilipatnam, Andhra Pradesh, India.

Place : Machilipatnam

Date :

Valued  
a student

  
Dr.L. Suseela

(Project advisor)

  
M. S waroopa Rani  
Dr.M.Swaroopa Rani

(Project advisor)




Head of the Department

HEAD  
DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003. A.P

## **CERTIFICATE**

This is to certify that **Mr. THATI SEETHARAMARAJU** Regd. No **Y21ZOO101022**, bonafide students of 4<sup>th</sup> semester **M.Sc. ZOOLOGY, Department of Bio-science & Bio Technology , Krishna University, Machilipatnam** .Carried out the project titled as **“A CASE STUDY ON CULTURE PRODUCTION AND USE OF SPIRULINA ”** during Period of 1<sup>st</sup> july 2023 to 21<sup>st</sup> september 2023, as a part of 4<sup>th</sup> semester curriculum. Under guidance of supervision.

  
29/9/23

Head,

Department of BioScience & Bio Technology

**HEAD**  
**DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY**  
**UNIVERSITY COLLEGE OF ARTS & SCIENCE**  
**KRISHNA UNIVERSITY**  
**MACHILIPATNAM - 521 003, A.P**

Signature of project guide

  
Valent G. S. J.

Place:

Machilipatnam Date:

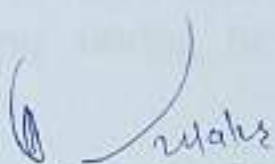
**EXTERNAL EXAMINAR**

## CERTIFICATE


This is to certify that the research work, described in this project report entitled " The Dynamic Growth Rate of Tilapia Fishes" at Machilipatnam , Andhra Pradesh India is the outcome of work carried out by Mr.Mandadapu Nagarjuna . Msc Zoology Roll no : Y21ZOO101013 project student, University college of Arts and Science, Krishna University ,Rudravaram , Machilipatnam , Andhra Pradesh , India.

Place : Machilipatnam

Date : 22/09/23.

  
Dr.Pallaval Veera Bramhachari.

(Project advisor)

  
V. G. S. S. S.

  
22/9/23.

Head of the Department

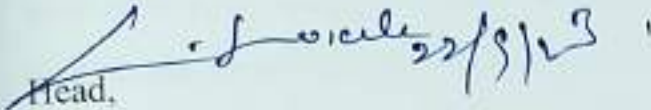
HEAD

DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003, A.P

Examiner's signature.

**CERTIFICATE**

This is to certify that Mrs. GERAKA DURGA Regd. No Y21ZOO101007, bonafide students of 4<sup>th</sup> semester M.Sc. ZOOLOGY, Department of Bio-science & Bio Technology , Krishna University, Machilipatnam .Carried out the project titled as "A CASE STUDY ON CULTURE PRODUCTION AND USE OF SPIRULINA " during Period of 1<sup>st</sup> july 2023 to 21<sup>st</sup> september 2023, as a part of 4<sup>th</sup> semester curriculum. Under guidance of supervision.

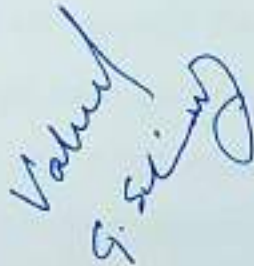
  
Head,

Department of BioScience & Bio Technology

**HEAD**  
**DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY**  
**UNIVERSITY COLLEGE OF ARTS & SCIENCE**  
**KRISHNA UNIVERSITY**  
**MACHILIPATNAM - 521 003. A.P**

GERAKA DURGA

  
Signature of project guide



Place:

Machilipatnam Date:

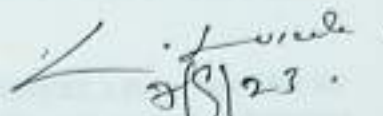
## CERTIFICATE

This is to certify that Miss. A.Anjali, Reg. No. Y20ZOO101001, II year M.Sc. Zoology form Department of Biosciences and Biotechnology, Krishna University Machilipatnam, completed the project entitled as "EXTRACTION OF CHITIN AND CHITOSAN FROM BIOWASTE OF SHRIMP FROM THE MACHILIPATNAM FISH MARKET", entire work has been carried out by her in the Dept. Of BSBT, Krishna university campus from 10th June 2023 to 15th Sep 2023. This work is towards partial fulfillment of Project in the 4th semester of M.Sc. Zoology. These work is original which has not been submitted in part or full for any university/institute.

  
Dr.L.Susheela, HEAD  
DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003. A.P

Dr.Ch.Suresh Babu,

Dr.M.Swaroop Rani, M.Swarupa Rani.

  
2/9/23.  
(PROJECT SUPERVISOR)

Faculty of Zoology

Dept. of Bioscience & Biotechnology

University College of Arts &

Sciences Krishna Universality

Machilipatnam

EXTERNAL EXAMINAR

## CERTIFICATE


This is to certify that **DUVVADA SRAVANI** Regd. No **Y21ZOO101006**, bonafide students of 4<sup>th</sup> semester **M.Sc. ZOOLOGY, Department of Bio-science & BioTechnology, Krishna University, Machilipatnam.** Carried out the project titled as **"A CASE AND BRIEF STUDY ON RODENTS"** during Period of 21<sup>st</sup> July 2023 to 2<sup>nd</sup> Aug 2023, as a part of 4<sup>th</sup> semester curriculum. Under guidance of supervision.



Head,

Department of BioScience & Bio Technology

HEAD  
DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003, A.P




Signature of project guide

M. Swaruparani -  
Signature of co-guide.

Place: Machilipatnam

Date:





EXTERNAL EXAMINER.

# CERTIFICATE

This is to certify that Miss. K. Venkata Ramana, Reg. No. Y20ZOO101011, II year M.Sc. Zoology form Department of Biosciences and Biotechnology, Krishna University Machilipatnam, completed the project entitled as "EXTRACTION OF CHITIN AND CHITOSAN FROM BIOWASTE OF SHRIMP FROM THE MACHILIPATNAM FISH MARKET", entire work has been carried out by her in the Dept. Of BSBT, Krishna university campus from 10th June 2023 to 15th Sep 2023. This work is towards partial fulfillment of Project in the 4th semester of M.Sc. Zoology. These work is original which has not been submitted in partor full for any university/institute.

  
Dr. L. Susheela, HEAD  
DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003, A.P.

  
(PROJECT SUPERVISOR)

Dr. M. Swaroopa Rani, 

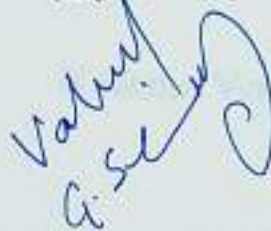
Faculty of Zoology

Dept. of Bioscience &

Biotechnology University College of

Arts & Sciences Krishna

Universality Machilipatnam

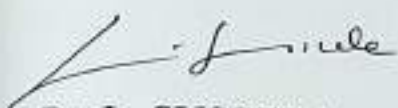
  
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G. S.

EXTERNAL EXAMINAR



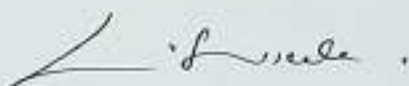
## CERTIFICATE

This is to certify that DASI KUSUMA KUMARI Regd. No Y21Z00101005 bonafide students of 4th semester M.Sc. ZOOLOGY, Department of Bio-science & Bio Technology , Krishna University, Machilipatnam .Carried out the project titled as "MANGROOVE FAUNA OF MACHILIPATNAM COAST" during Period of 1st july 2023 to 21st september 2023, as a part of 4th semester curriculum. Under guidance of supervision.



Dr. L. SUSSELA

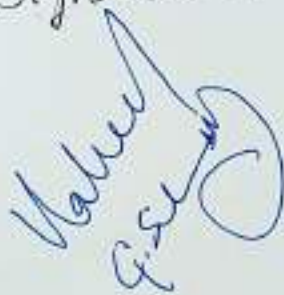
(project guide)



Dr. L. SUSEELA

(Head of the department)

M. Swarnapalani  
Signature of C.O guide



EXTERNAL EXAMINER

## CERTIFICATE

This is to certify that the project report entitled "ANIMAL HEALTH MONITORING IN ICMR NARFBR" is a bonafied work carried out by Ms. B. HARI PRIYA (Y21ZOO101004) under my supervision is submitted in partial fulfillment of the requirements for the award of degree of Master of Science Bio Science & Bio Technology to Krishna University Machilipatnam, A.P. No part of the dissertation has been submitted for any degree/diploma or any other academic award any where before.

PLACE: MACHILIPATNAM

DATE :



Dr. L. SUSEELA

(PROJECT ADVISOR)

CO-Guide:

M. Swaruparani



HEAD OF THE DEPARTMENT

HEAD  
DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 002, A.P.



EXTERNAL EXAMINER

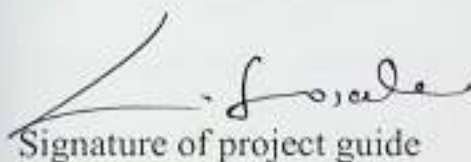
**CERTIFICATE**

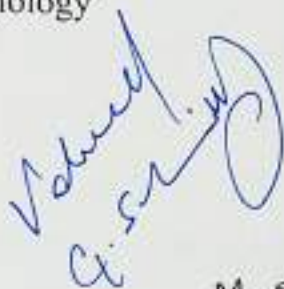
This is to certify that ANDA HEMALATHA Regd. No  
Y21ZOO101002, bonafide students of 4<sup>th</sup> semester M.Sc.  
ZOOLOGY, Department of Bio-science & BioTechnology,  
Krishna University, Machilipatnam. Carried out the project titled as  
"A CASE AND BRIEF STUDY ON RODENTS" during Period of  
21<sup>st</sup> july 2023 to 2<sup>nd</sup> aug 2023, as a part of 4<sup>th</sup> semester curriculum.  
Under guidance of supervision.

  
Head,

Department of BioScience & Bio Technology

HEAD  
DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003, A.P

  
Signature of project guide



M. Swarnaarani,  
Signature of co-guide.

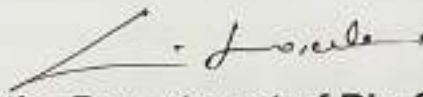
Place: Machilipatnam

Date: 20/9/23

EXTERNAL EXAMINER

## CERTIFICATE

This is to certify that **S.VERONIKA** Regd. No **Y21ZOO101019**, bonafide students of 4<sup>th</sup> semester **M.Sc. ZOOLOGY**, Department of Bio-science & Bio Technology, Krishna University, Machilipatnam. Carried out the project titled as "**A CASE STUDY ON GENETICALLY IMPROVED FARMED TILAPIA (GIFT) AT RAJIV GANDHI CENTER FOR AQUACULTURE**" during Period of 21<sup>st</sup> July 2023 to 2<sup>nd</sup> Aug 2023, as a part of 4<sup>th</sup> semester curriculum. Under guidance of supervision.



**Head of the Department of Bio-Science & Bio Technology**

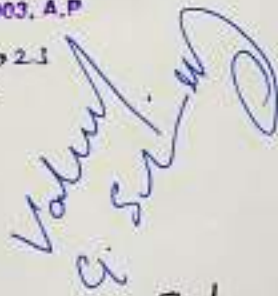
**DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003, A.P**

*J. Navendu* 20/9/2023

Signature of project guide

Place: Machilipatnam

Date: 22/09/23

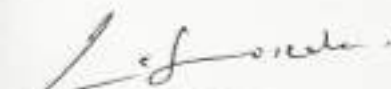


External Examiner

## CERTIFICATE

This is to certify that KALAPALA KEERTHANA Regd. No Y21Z00101008 bonafide students of 4th semester M.Sc. ZOOLOGY, Department of Bio-science & Bio Technology, Krishna University, Machilipatnam .Carried out the project titled as "MANGROOVE FAUNA OF MACHILIPATNAM COAST" during Period of 1st july 2023 to 21st september 2023, as a part of 4th semester curriculum. Under guidance of supervision.

Valent  
G. Susela



Dr. L. SUSSELA

(project guide)



Dr. L. SUSEELA

(Head of the department)

HEAD

DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003, A.P

M. Swaruparani  
(Signature of Co. Guide)

EXTERNAL EXAMINER

## CERTIFICATE

This is to certify that the research work described in this project report entitled "A Study On Tilapia Fish Excreting Material As A Source Nutrients For Aquaponics Systems at Machilipatnam , Andhra Pradesh India" is the outcome of work carried out by Mr. Taraka Rama Naik, Kelavathu Msc Zoology Roll no: Y21ZOO101010 project student, University college of Arts and Science, Krishna University, Rudravaram , Machilipatnam , Andhra Pradesh , India.

Place : Machilipatnam

Date :

Valent  
G. Suresh

J. Navanya Latha  
20/11/2023

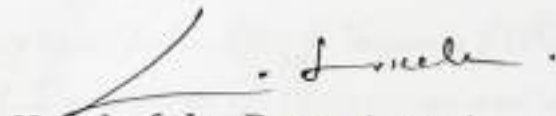
**Dr. J.N.LavanyaLatha**

(Project advisor)

Ch. Suresh Babu

**Dr. Ch Suresh Babu**

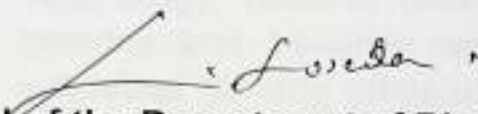
(Project advisor)

  
**Head of the Department**

DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003. A.P

## CERTIFICATE

This is to certify that P. ANUSHA Regd. No Y21ZOO101017, bonafide students of 4<sup>th</sup> semester M.Sc. ZOOLOGY, Department of Bio-science & Bio Technology , Krishna University, Machilipatnam .Carried out the project titled as "A CASE STUDY ON GENETICALLY IMPROVED FARMED TILAPIA (GIFT) AT RAJIV GANDHI CENTER FOR AQUACULTURE "during Period of 21<sup>st</sup>july 2023 to 2<sup>nd</sup>aug 2023, as a part of 4<sup>th</sup> semester curriculum. Under guidance of supervision.



Head of the Department of Bio-Science & Bio Technology

HEAD

DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY

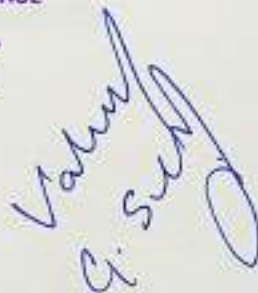
MACHILIPATNAM - 521 003, A.P

J. Navaneetha 20/9/2023

Signature of project guide

Place: Machilipatnam

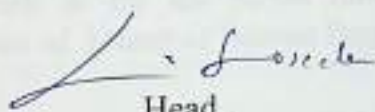
Date: 22/09/23



External Examiner.

## CERTIFICATE


This is to certify that T ANUSHA Regd. No Y21ZOO101021, bonafide students of 4<sup>th</sup> semester M.Sc. ZOOLOGY, Department of Bio-science & Bio Technology , Krishna University, Machilipatnam .Carried out the project titled as "A CASE STUDY ON CULTURE OF LITOPENAEUS VANNAMEI" during Period of 11 August 2023 to 21<sup>st</sup> september 2023, as a part of 4<sup>th</sup> semester curriculum. Under guidance of supervision.



Head,

Department of BioScience & Bio Technology

**HEAD**  
DEPARTMENT OF BIOSCIENCES & BIOTECHNOLOGY  
UNIVERSITY COLLEGE OF ARTS & SCIENCE  
KRISHNA UNIVERSITY  
MACHILIPATNAM - 521 003. A.P

  
Signature of project guide

Place: Machilipatnam Date:

  
Vahaneer  
G. S. S. R.

EXTERNAL EXAMINER