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# **T.K.M College of Arts & Science**

Kollam – 691005, Kerala

Ref

Date

## **DEPARTMENT OF ZOOLOGY**

### **CERTIFICATE COURSE IN FISHERY BY PRODUCTS AND VALUE ADDITION**

**FOR THE ACADEMIC YEAR 2023-24**

**COURSE COORDINATOR**

**DR. MUMTHAS Y**

**ASSISTANT PROFESSOR**

# CERTIFICATE COURSE

Offered by

## DEPARTMENT OF ZOOLOGY

T.K.M. College of Arts and Science, Kollam-05  
(Accredited by NAAC at A++ level)

# FISHERY BY-PRODUCTS AND VALUE ADDITION

ZO 2301

Duration: 30 hours

**Aim:** To equip students with comprehensive knowledge and skills in the utilization of fishery by-products and value addition techniques

**Brief description:**

The course covers various aspects such as the nutritional analysis of fishery by-products, exploring innovative methods for converting them into value-added products, analyzing market trends for sustainable utilization, and studying quality control measures. Through this curriculum, students will gain a holistic understanding of maximizing the potential of fishery by-products, contributing to both nutritional enhancement and economic viability in the fisheries industry.

**Course Coordinator: Dr. Mumthas Y**

Course instructors: Dr. Jasin Rahman V. K., Dr. Rohini Krishna M. V. and Dr. Mumthas Y

Roll number	Candidate Code	Admission number	Full name with initial (e.g. Sabitha Manoj AS)	Gender (M/F)	DOB (DD/MM/YYYY)	Signature
6527	25023142009	59400	Nazila M	F	31-08/2005	Nazila
6519	25023142027	59621	Vrinda SR	F	18-01/2004	Vrinda
6513	25023142019	59629	Geethanjali S J	F	15-05/2005	Geetha
6508	25023142016	59290	Anjana G S	F	04-12/2004	Anjana
6517	25023142026	59643	Saniya S	F	04-06/2004	Saniya
6506	25023142014	59338	Aliya Nasrine	F	28-09-2005	Aliya
6515	25023142022	59337	N.S Nerooda	F	29-6-2005	N.S Nerooda
6507	25023142015	59292	ANILA L	F	07-03-2005	Anila
6509	25023142017	59286	Ardra R	F	09-02/2005	Ardra
6520	25023142001	59342	AdhithyaSreekumar	M	23-03/2005	Adhithya
6531	25023142028	59657	Adheena maju	F	20-07/2005	Adheena
6537	25023142034	59528	Thamanna KM	F	18-07/2005	Thamanna
6505	25023142013	59277	Alfiya N	F	30-08/2005	Alfiya
6525	25023142005	59558	Fathuma A	F	18-05/2005	Fathuma
6530	25023142012	59314	Vandana Shaji	F	03-02/2005	Vandana
6528	25023142010	59373	Surumi. K	F	13-10/2005	Surumi
6532	25023142029	59557	Asna Azeer	F	13-08/2005	Asna
6523	25023142003	59129	Archana M	F	01-03/2005	Archana
6534	25023142031	59598	Liya Najim	F	20-04-2005	Liya
6503	25023142024	59402	Noufal sajeev	M	02-08/2004	Noufal
6535	25023142032	59453	Nandana raju	F	11-09/2004	Nandana
6526	25023142008	59693	Nandana NS	F	18-05/2005	Nandana
6524	25023142004	59127	Ardhana. A	F	14-04/2005	Ardhana
6501	25023142020	59651	MUHAMMAD MISHAL	M	10-05/2003	Mishal
6533	25023142030	59705	Asna parveen	F	26-05/2005	Asna
6502	25023142021	59661	MUHAMMED AFSAL	M	16-09-2004	Afsal
6522	25023142002	59687	AkshayaGopan	F	10-05/2005	Akshaya
6521	25023142007	59414	Manusuthan S	M	10-03/2005	Manusuthan
6514	25023142006	59121	Krishna Sree M S	F	17-01/2005	Krishna
6516	25023142023	59606	Nivedya.s	F	10-03/2005	Nivedya
6511	25023142018	59699	Fathima.N	F	12-09/2004	Fathima
6529	25023142011	59246	Thrishna S.R	F	05-05/2005	Thrishna
6504	25023142025	59352	Sairaj R	M		Sairaj

# DEPARTMENT OF ZOOLOGY

## CERTIFICATE COURSE ON FISHERY BY-PRODUCTS AND VALUE ADDITION COURSE CODE: ZO 2301

### CURRICULUM

Total - 30 Hrs.

#### Module 1: Nutritional importance of fish meal (10 Hrs)

##### 1.1 Nutritional importance of fish meal and quality requirements (4 Hrs)

Raw material quality and changes during processing and storage. Production of fish meal - dry and wet process, control of the quality of products, packaging, and storage.

##### 1.2. Fish body and liver oils. (4 Hrs)

Nutritional importance of fish oil and methods to impart stability to fish oils on storage, unsaponifiable factors in fish liver oils. Enzyme hydrolysis of fish, fish hydrolysates, hydrolysates enriched food beverages.

##### 1.3. Fish protein concentrate (2 Hrs)

Different methods of production, different types of FPC, Production of fish flour, quality, standards, and applications.

#### Module 2: Fish by-products (18 Hrs)

##### 2.1. Miscellaneous by-products (8 Hrs)

Fish maws, shark liver oil, ambergris, shark skin, shark cartilage, isinglass, pearl essence, fertilizer, Béche-de-mer, fish glue, agar-agar. Extraction of collagen from fish processing wastes, properties and application.

##### 2.2. Value Added Products: (8 Hrs)

Present market trends, scope of value addition, and Important value-added products. Coated products – Principles and type of coating, Batter classification, Mechanical properties of batter, Bread crumbs, Flavourings, Seasonings and Hydrocolloids in coatings, Fat and oils in coated food, Application of batters and breading to seafood.

##### 2.3. Present market trends of value-added products. (2 Hrs)

Value added products from fishes, Present market trends, scope of value addition, Types of value addition.

#### Module 3: HACCP Concept in Sea Food Industry (2 Hrs)

##### 3.1. Introduction to the HACCP programme and HACCP evaluation: (2 Hrs)

Biological Hazards in Seafood, The seven Principles of HACCP, Good Manufacturing Practices, Good laboratory practices, Role of extension in the implementation.

## References

1. Balachandran, K.K., Post Harvest Technology of fish and fish products.
2. Gopakumar K., Text Book of Fish Processing Technology.
3. Hall, G.M., Fish Processing Technology.
5. Sen D.P., Advances in Fish Processing Technology.
6. Wheaton & Lawson, Processing Aquatic Food Products.
7. Windsor, M. & Barlow, Introduction to Fishery Byproducts, Fishing.

Co-ordinators

*RB*

*[Signature]*  
HoD

**Dr. ROHINI KRISHNA M V**  
Asst. Professor  
Dept. of Zoology  
TKM College of Arts & Science  
Kollam, Kerala - 691 005.

**Dr. JASIN RAHMAN. V.K**  
Asst. Professor  
Dept. of Zoology  
TKM College of Arts & Science  
Kollam, Kerala - 691 005.



*[Signature]*  
16/10/23.  
Dr. Chithra Gopinath  
Assistant Professor  
Principal in-Charge  
Drawing & Disbursing Officer  
T.K.M. College of Arts & Science  
Kollam - 691005, Kerala

# **DEPARTMENT OF ZOOLOGY**

## **CERTIFICATE COURSE ON FISHERY BY-PRODUCTS AND VALUE ADDITION COURSE CODE: ZO 2301**

**Year: 2023-2024**

### **CC4 : Fishery by-products and value Addition**

- A written examination was conducted after the completion of the course. Grades were awarded on the following basis:
- 80% and above- A Grade
- 70 - 79% - B Grade
- 60 -69% - C Grade
- 50-59% - D Grade
- 40-49% - E Grade
- The total marks were for 50 (40 for the written exam and 5 for attendance and 5 for assignments)
- The written exam consisted of 20 multiple choice questions with each of the questions carrying 2 marks.

## **CERTIFICATE COURSE: 2023 - 24**

### **Department of Zoology**

#### **Fishery by-products and Value addition**

The Department of Zoology conducted an additional skill acquisition programme, on Fishery by-products and Value addition in the academic year 23-24. The programme aimed at equipping the I & II year BSc. (Zoology) students, with knowledge of Fishery by-products and Value addition. The number of participants who registered for the course in the academic year 23-24 was 62. The training was imparted to the students of Semester 1 and 2.

The highlight of the programme was the thrust given on the enhancement of trial-based activities, the grasp of the students in the programme was enhanced through practically important topics such as different types of fishery by-products and their Value addition. The course modules were designed by the faculty members of the Department of Zoology after consultation with teams from the National Skill Development Corporation (NSDC) and Knack Enlighten. The module on the economically important species of fish and its value addition helped the students grasp the course's importance.

The students were evaluated, after each activity, based on their performance of the various tasks given. Their knowledge of the subject includes identifying the species of marine and freshwater fishes. Their capacity to identify various types of fish diseases and their causative pathogens was tested through written and practical exams. Based on the feedback of the students, the course was very interesting. It was a method of generating additional income after their graduation, as they could carry out minor cultural activities in local water bodies. Moreover, the knowledge of the subject and the certificates could be useful in applying for aquaculture-based jobs.

The course had a duration of 30 hours out of which 20 hours of theory and 10 hours of practical sessions. A written examination was conducted after the completion of the course. Grades were awarded on the following basis:

80% and above- A Grade

70 - 79% - B Grade

60 -69% - C Grade

50-59%- D Grade

40-49%- E Grade

Classes were engaged by Dr Jasin Rahman VK, Dr Rohini Krishna. M V, Dr Mumthas Y and Miss. Remya S Department of Zoology.

**Course outcomes:**

CO.1. Acquiring knowledge of value added fish products and keeping.

CO.2. Develop entrepreneurship on fish products maintenance techniques.

CO.3. Getting hands-on exposure to students on various aspects of Fishery by-products and Value addition.

CO.4. Makes students able to identify commonly used value added fishes.

CO.5. Develops students' ability to identify fishery by-products and Value addition with innovative strategies.

CO.6. Develop an insight into the mechanical equipment used along with the maintenance of fishery by-products and its value-added products.

CO.7. Develops student's ability to identify the major disease by merely noticing symptoms.

CO.8. Develop the ability to breed fish in a controlled environment.

CO.9. Develop knowledge in maintaining HACCP Concept in Sea Food Industry.

CO 10. Make them self-sufficient knowledge to recognize present market trends of value-added products.

SL NO	ROLL NO	Admission number	Name	Sign
1	6501	59651	Muhammad Mishal	
2	6502	59661	Muhammed Afsal S	
3	6503	59402	Nonfal S	
4	6504	59852	Sairaj K S	
5	6505	59277	Alfiza N	
6	6506	59338	Aliya Nassine	
7	6507	59292	Anila. L	
8	6508	59290	Anyana G S	
9	6509	59286	Andra. K	
10	6510	59686	Anyia Sndhi	
11	6511	59705	Asna Praveen	
12	6512	59699	Fathima N	
	DISCONTINUED		Crangan S	
13	6513	59629	Geethanjali. S	
14	6515	59128	Krushna Sree MS	
15	6516	59337	N.S Nerooda	
16	6517	59688	Nivedya. S	
17	6518	59673	Saniya S	
1	DISCONTINUED		Swathy S	
18	6519	59621	Vaunda. SB	
19	6520	59342	Adithya Sreekumar	
20	6521	59414	Mamun Sulthan S	
21	6522	59687	Akshaya Gopam	
22	6523	59129	Archana. M	
23	6524	59127	Archana. A	
24	6525	59558	Fathima. A	
25	6526	59693	Namdhana N.S	
26	6527	59400	Nazila M	
27	6528	59373	Surumi K	
28	6529	59246	Thruslma SB	
29	6530	59314	Vandana. Shafi	
30	6531	59657	Adheena.	
31	6532	59657	Asma Azeer	
32	6533	59698	Luiza Nazim	





Name of the Institute: .....

Section: ..... Place: .....

Sl. No	Admission No.	NAME	Name of the Institute																															No. of Days Present	FEES Rs.	Date of Payment
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
1	59651	Muhammed Nishad	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
2	59661	Muhammed Ahsad S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
3	59702	Noufal S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
4	59852	Rameej R.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
5	59277	Alfiya N	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
6	59338	Alfiya Nazim	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
7	59292	Amal A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
8	59270	Angamias P S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
9	59202	Andra. R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
10	59826	Anaya Sudhi	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
11	59785	Anees Rasheem	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
12	59899	Fathima N	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
13	59229	Geethanjali S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
14	59121	Karimudaul M S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
15	59237	N.S Nivedha	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
16	59202	Nivedya S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
17	59243	Saniya S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
18	59621	Reshmiya Yashida SR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
19	59342	Adithyana Sreethaman	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
20	59944	Mamun Salim S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
21	59237	Ashrafya Gopam	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
22	59129	Ashwani M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
23	59221	Ardhana A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
24	59255	Fathima. A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
25	59253	Nandhana N S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
26	59400	Mazila M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
27	59373	Suzumi K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
28	59246	thuthina SR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
29	59344	Vandana Shaji	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
30	59657	Adhana	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
31	59257	Aseem Ayaz	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
32	59238	Shayk Najim	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28				
Number present M																																				
Daily E																																				

No on roll at the beginning of month

Admitted during the month

Left No. on Roll at end of month

No. of Working days

Average attendance during the month

No. on Roll during month





Sl. No 5525

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

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## CERTIFICATE

This is to certify that Mr./Ms. *Kaishna Sree . M S*

of *2023-2025* batch with Ad. No. *59121*


has successfully completed the certificate course on.....

*Fisheay By-products And Value Addition*

conducted by the Department of *Zoology*

during the academic year *2023-2024*

Grade awarded *A*

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No 5526

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Ardhana : A  
of 2023-2025 batch with Ad. No. 59127  
has successfully completed the certificate course on  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No 5527

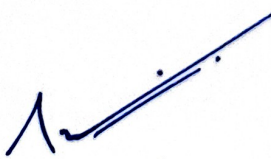
# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

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## CERTIFICATE

This is to certify that Mr./Ms. Archana M  
of 2023-2025 batch with Ad. No. 59129  
has successfully completed the certificate course on  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No 5528

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Anila L  
of 2023-2025 batch with Ad. No 59292  
has successfully completed the certificate course on  
Fishey By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department



Sl. No **5529**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Anjana G.S  
of 2023- 2025 batch with Ad. No. 59290  
has successfully completed the certificate course on  
Fisheay By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023 - 2024  
Grade awarded A

Course Co-ordinator

Head of the Department



Sl. No **5530**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Thaishna S R  
of 2023-2026 batch with Ad. No. 59246  
has successfully completed the certificate course on.....  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No **5531**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms..... Alfiya N  
of 2023-2025..... batch with Ad. No..... 59277  
has successfully completed the certificate course on.....  
Fisheay By-products And Value Addition  
conducted by the Department of..... Zoology  
during the academic year..... 2023-2024  
Grade awarded..... A

Course Co-ordinator

Head of the Department



Sl. No **5532**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Aadha R  
of 2023-2025 batch with Ad. No. 59286  
has successfully completed the certificate course on.....  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department



Sl. No **5533**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Fathima N  
of 2023-2025 batch with Ad. No. 59699  
has successfully completed the certificate course on  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department



Sl. No **5534**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Muhammed Afsal S  
of 2023-2025 batch with Ad. No. 59661  
has successfully completed the certificate course on  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department



Sl. No 5535

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Asna Azeed  
of 2023-2025 batch with Ad. No. 59557  
has successfully completed the certificate course on  
Fisbery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department



Sl. No **5538**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Nandana . N S  
of 2023- 2026 batch with Ad. No. 59693  
has successfully completed the certificate course on.....  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023- 2024  
Grade awarded B

Course Co-ordinator

Head of the Department

Principal



Sl. No **5537**

# T. K. M. COLLEGE OF ARTS & SCIENCE


KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Geethanjai . SJ  
of 2023-2026 batch with Ad. No. 59629  
has successfully completed the certificate course on.....  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year. 2023-2024  
Grade awarded..... C

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No

5538

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Liya Najim  
of 2023-2026 batch with Ad. No. 59598  
has successfully completed the certificate course on.....  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department

Principal



Sl. No **5539**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Nivedya. S  
of 2023-2025 batch with Ad. No. 59601  
has successfully completed the certificate course on.....  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department

Principal



Sl. No **5540**

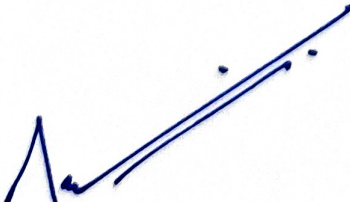
# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Nandana Raju  
of 2023-2026 batch with Ad. No. 59453  
has successfully completed the certificate course on.....  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No **5541**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Akshaya Gopan  
of 2023-2025 batch with Ad. No. 59687  
has successfully completed the certificate course on  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department

Principal



Sl. No **5542**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms..... Sai Raj R.S  
of 2023-2026..... batch with Ad. No..... 59352  
has successfully completed the certificate course on.....  
Fisheay By-products And Value Addition  
conducted by the Department of..... Zoology  
during the academic year..... 2023-2024  
Grade awarded..... A

Course Co-ordinator

Head of the Department

Principal



Sl. No **5543**

**T. K. M. COLLEGE OF ARTS & SCIENCE**  
**KOLLAM - 691005**  
Affiliated to the University of Kerala

**CERTIFICATE**

This is to certify that Mr./Ms. Fathima A  
of 2023 - 2026 batch with Ad. No. 59558  
has successfully completed the certificate course on  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year. 2023-2024  
Grade awarded B

Course Co-ordinator

Head of the Department

Principal



Sl. No **5544**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms..... *Nazila.M*.....  
of *2023-2026* batch with Ad. No..... *59400*.....  
has successfully completed the certificate course on.....  
*Fishery By-products And Value Addition*.....  
conducted by the Department of..... *Zoology*.....  
during the academic year..... *2023-2024*.....  
Grade awarded..... *A*.....

Course Co-ordinator

Head of the Department

Principal



Sl. No

5545

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Vandana Shaji  
of 2023-2026 batch with Ad. No. 59314  
has successfully completed the certificate course on  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department

Principal



Sl. No **5546**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Saniya. S

of 2023-2026 batch with Ad. No. 59643

has successfully completed the certificate course on

Fishery By-products And Value Addition

conducted by the Department of Zoology

during the academic year 2023-2024

Grade awarded A

Course Co-ordinator

Head of the Department

Principal



Sl. No

5547

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms..... *N. S. Neeooda*.....  
of *2023-2026*..... batch with Ad. No. *59337*.....  
has successfully completed the certificate course on.....  
*Fishery By-products And Value Addition*.....  
conducted by the Department of..... *Zoology*.....  
during the academic year..... *2023-2024*.....  
Grade awarded..... *A*.....

Course Co-ordinator

Head of the Department



Sl. No **5548**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Aliya Nasaine  
of 2023-2026 batch with Ad. No. 59338  
has successfully completed the certificate course on  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

Course Co-ordinator

Head of the Department

Principal



Sl. No **5549**

**T. K. M. COLLEGE OF ARTS & SCIENCE**  
**KOLLAM - 691005**  
Affiliated to the University of Kerala

**CERTIFICATE**

This is to certify that Mr./Ms. Muhammad Mishal  
of 2023-2026 batch with Ad. No. 59651  
has successfully completed the certificate course on  
Fisheay By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year. 2023-2024  
Grade awarded. A

Course Co-ordinator

Head of the Department

Principal



Sl. No

5550

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Noufal S  
of 2023-2026 batch with Ad. No. 59402  
has successfully completed the certificate course on  
Fishery By-products And Value Addition  
conducted by the Department of Zoology  
during the academic year 2023-2024  
Grade awarded A

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No **5551**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms..... *Vainda . S R*.....  
of *2023- 2026*..... batch with Ad. No..... *59621*.....  
has successfully completed the certificate course on.....  
*Fishery By-products And Value Addition*.....  
conducted by the Department of..... *Zoology*.....  
during the academic year..... *2023- 2024*.....  
Grade awarded..... *A*.....

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No 5552

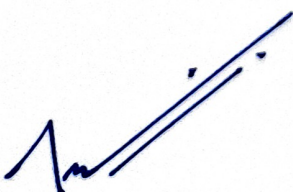
# T. K. M. COLLEGE OF ARTS & SCIENCE


KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Thamanna. KM  
of 2023-2026 batch with Ad. No. 59528  
has successfully completed the certificate course on  
Fishery By-products And value Addition  
conducted by the Department of Zoology  
during the academic year. 2023-2024  
Grade awarded A

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No **5553**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms..... *Suzumi . k*.....  
of *2023-2026*..... batch with Ad. No..... *59373*.....  
has successfully completed the certificate course on.....  
*Fishezy By-products And Value Addition*.....  
conducted by the Department of..... *Zoology*.....  
during the academic year..... *2023-2024*.....  
Grade awarded..... *A*.....

Course Co-ordinator

Head of the Department

Principal



Sl. No **5554**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. *Adheena Mayu*  
of *2023 - 2026* batch with Ad. No. *59657*  
has successfully completed the certificate course on  
*Fishery By-products and Value addition*  
conducted by the Department of *Zoology*  
during the academic year. *2023 - 2024*  
Grade awarded. *A*

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No **5555**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. Adhithya Soekumar  
of 2023-2026 batch with Ad. No. 59342  
has successfully completed the certificate course on.....  
Fishery By-products and Value addition  
conducted by the Department of Zoology  
during the academic year..... 2023 - 24  
Grade awarded..... A

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No **5556**

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. *Manusuthan S*  
of *2023 - 2026* batch with Ad. No. *59414*  
has successfully completed the certificate course on  
*Fishery By-products and Value addition*  
conducted by the Department of *Zoology*  
during the academic year. *2023 - 24*  
Grade awarded. *A*

  
Course Co-ordinator

  
Head of the Department

  
Principal



Sl. No

5557

# T. K. M. COLLEGE OF ARTS & SCIENCE

KOLLAM - 691005

Affiliated to the University of Kerala

## CERTIFICATE

This is to certify that Mr./Ms. *Aсна Paoveen*  
of *2023-2026* batch with Ad. No. *59705*  
has successfully completed the certificate course on  
*Fishery By-product and Value addition*  
conducted by the Department of *Zoology*  
during the academic year. *2023-24*  
Grade awarded. *B*

  
Course Co-ordinator

  
Head of the Department

  
Principal

SLNO	Admission Number	Name of the student	Grade	Sign
1	59651	Muhammad Mishal	A	<del>Muhammad</del>
2	59661	Muhammed Afsal S	A	<del>Afsal</del>
3	59402	Noufal S	A	<del>Noufal</del>
4	59352	Saiyaz R.S	A	<del>Saiyaz</del>
5	59279	Alfiza N	A	<del>Alfiza</del>
6	59338	Ahiya Nassrine	A	<del>Ahiya</del>
7	59292	Anila L	A	<del>Anila</del>
8	59290	Anyana G S	A	<del>Anyana</del>
9	59286	Ascha R	A	<del>Ascha</del>
10	59686	Arya Sudhi	Discontinued	
11	59705	Asna Praveen	B	<del>Asna</del>
12	59699	Fathima N	A	<del>Fathima</del>
13	59629	Geethasajalis	C	<del>Geetha</del>
14	59121	Krishna Sree M S	A	<del>Krishna</del>
15	59337	N.S Neurooda	A	<del>Neurooda</del>
16	59666	Nivedya S	A	<del>Nivedya</del>
17	59643	Samiya S	A	<del>Samiya</del>
18	59622	Vrinda SR	A	<del>Vrinda</del>
19	59842	Adithya Sreekrumar	A	<del>Adithya</del>
20	59414	Mami Sulthan S	A	<del>Mami</del>
21	59687	Akshaya Gepon	A	<del>Akshaya</del>
22	59129	Archana M	A	<del>Archana</del>
23	59127	Archana A	A	<del>Archana</del>
24	59558	Fathima A	B	<del>Fathima</del>
25	59693	Nandhana N.S	B	<del>Nandhana</del>
26	59400	Nazila M	A	<del>Nazila</del>
27	59373	Sushmi K	A	<del>Sushmi</del>
28	59246	Thrushna SR	A	<del>Thrushna</del>
29	59314	Vandana Shaji	A	<del>Vandana</del>
30	59657	Adheena	A	<del>Adheena</del>
31	59557	Asna Azeer	A	<del>Asna</del>
32	59598	Liya Najim	A	<del>Liya</del>
33	59453	Nandana Raju	A	<del>Nandana</del>
34	59509	Subhana Beeri S	Discontinued	
35	59528	Thamanna Km	A	<del>Thamanna</del>