KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR)

DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added Programme

On

ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

Dr S.Karthikumar, ASP/BT

Dr K.Geetha, ASP/BT

Dr R.Shyam Kumar, Prof/BT — Dr R.Shyam Kumar

VAP Coordinators — HoD/BT

8/2/2024.
VAC Incharge
S. Meilakshi - CSE

(Verified)

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DEPARTMENT OF BIOTECHNOLOGY

Sl No	Content Check List		Document
1	Academic Year	:	2023-2024
2	Regulation	:	R2021
3	Department Name	:	Biotechnology
4	Name of the Value-added course	:	Industry Certified Value Added Programme on ALGAL TECHNOLOGY AND APPLICATIONS
5	No. of Credits	:	02
6	Category: Theory/Lab/Hands-on/Skill based etc	:	Hands-on/Skill based
7	Name and Details of the Joint-organization (industry/NGO etc) if any	:	1. **AK Seaweeds**, 113/1A Nochioorani Villagae, Ramanathapuram (Dist) 623517, Tamil Nadu, India. 2. **Phycospora Breeding & Propagate**, 15/16A, Sallimalai, GP Road, Ramanathapuram 623526, Tamil Nadu, India.
8	Resource person details	:	1. **Mr. R.P.Rajadurai Jesudoss**, Manager, AK Seaweeds, Ramnadapuram, Tamil Nadu 2. **Mr M.Selva Kumar**, Technical Lead, Phycospora Breeding & Propagate, 15/16A, Sallimalai, GP Road, Ramanathapuram 623526
9	Three Member Committee details	:	1. **Dr.R.Shyam Kumar** (Head/BT & Convener) 2. **Dr.K.Geetha** (Associate Professor / BT & Member) 3. **Dr.S.Karthikumar** (Associate Professor / BT & Member)
10	VAC Coordinator Details	:	Dr K.Geetha, Dr S.Karthikumar & Dr R.Syam Kumar
11	Duration (30 h mandatory)	:	30 h; 5 days
12	Period (From-To)	:	5th to 8th and 12th February 2024
13	Venue	:	1. Department of Biotechnology, KCET 2. AK Seaweeds, 113/1A Nochioorani Villagae, Ramanathapuram

VAP Coordinators
Dr K.Geetha Dr S.Karthikumar
Dr R.Shyam Kumar

HoD/BT
Dr R.Shyam Kumar

Dean (Academic Courses)
Dr R. Suresh Babu

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DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added Programme

On

ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

Enclosures:

Sl No	Check List	Availability
1	Institution Approval Copy	✓
2	Circular	✓
3	Syllabus Copy with Course outcomes	✓
4	BoS Approval	✓
5	Three Member Committee MoM	✓
6	Geo-Tagged Photos	✓
7	Certificates of all participants	✓
8	Examination Schedule	✓
9	Questions & Answer Keys	✓
10	Attendance Sheet	✓
11	Evaluated Answer script	✓
12	Test Report	✓
13	Mark Statement	✓
14	Grade Sheet	✓
15	Feedback form	✓
16	Feedback analysis and Report	✓
17	Programme Summary / Report	✓
18	Students' oral feedback (recorded video)	
19	VAC – Short Video	

VAP Coordinators
Dr K. Geetha, Dr S. Karthikumar
Dr R. Shyam Kumar

HoD/BT
Dr R. Shyam Kumar

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APPROVAL BOOK

Book No.

BIOTECH

Date 19/1/24

SL.No. 6

Respected Sir,

Approval may please be given to conduct Value added course for 3rd year BT in association with AK Seaweeds, Ramanathapuram in the field of Algal Technology, as per the module attached during 5th feb.24 to 9th feb.24.

Approval may also be given at the cost of ~~to cost~~ Rs.1300/- per student in 3rd yr BT.

VAC - coordinators : Dr. K. Geetha & Dr. S. Karthikumar

19/1/24
Signature of Staff

19/1/24
HoD

19/1/24
PRINCIPAL

OFFICE USE

1) Account Head : Value Added Course.
2) Budget allotted : 41 Students @ Rs.1300/-
3) Amount committed / Spent sofar : Rs. 53,300/-
4) Balance available :

Administrative Officer

Secretary

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DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added Programme on

"ALGAL TECHNOLOGY AND APPLICATIONS"

5th to 8th and 12th February 2024

Objective:

- Know about different types of algae and their diversification.
- Know about cultivation of micro and macro algae.
- Learn the application of algae in various biotechnological perspectives

Need for the Value Added Program:

- The major objective of this program is to give an insight on basics of Algal Technology and Entrepreneurship development to the students and to provide hands-on training in seaweed cultivation and product development so that students will be able to learn the basic aspects of seaweed cultivation and apply them towards product development from seaweed, fostering innovation and sustainable business practices.
- "Algae" is an application part of Microbiology and Industrial biotechnology course work the students have learnt. This VAP will help them to develop entrepreneurship focus on Algae based product development.

Target Participants:

Class: **II B.Tech. Biotechnology** (2022-26 Batch)

No. of students: **41**

Duration: 5 Days

Tentative Dates: 5th to 8th and 12th February 2024

Programme Coordinators: Dr S.Karthikumar, Dr K.Geetha and Dr R.Shyam Kumar

Expected Outcome:

- The students will learn the necessary skills and knowledge for the cultivation of Algae and product development from algae.
- This workshop also aims to motivate the students to take up Entrepreneurship as career prospective in future.

PROGRAM SCHEDULE

DATE	9.00 am to 9.30 am	9.30 am to 10.50 am	11.10am to 12.50pm	1.30 pm to 3.00 pm	3.00 pm to 4.00 pm
05/02/2024	**Inaugural Session**	Introduction to Algae	Types of Algae	Cultivation of Micro algae	Cultivation of Macro algae
06/02/2024	Natural Bio polymers and their applications		Methods of Extraction of Bio polymers from algae	Hands-on Session on Bio polymer extraction	
07/02/2024	Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry				
08/02/2024	Value addition and Commerce from Seaweeds			Hands-on session	
12/02/2024	Student Presentation			Validation through test	**Valedictory Session**

BUDGET

Sl.No	Category	Particulars	Price (Rs.)	Total (Rs.)
1	Training Charges	Resource person fees & Hands-on training material. Rs 1300 x 41	53,300	**53,300**
6	General	Workshop Kit (Note Pad, Pen) Rs.20x41	820	**820**
7		Lunch & Snacks to Resource Persons (2 Members)	1000	**1,000**
8	Miscellaneous	Overhead charges	1,000	**1,000**
			TOTAL	**56,120/-**
Cost Per Student: Rs.56,120/41 = Rs. 1,369/-				

Programme Co-ordinators
Dr K.Geetha, Dr S.Karthikumar, Dr R.Shyam Kumar

HoD/BT
Dr R.Shyam Kumar

Principal
Dr S.Senthil

AK SEAWEEDS

113/1A Nochioorani Village, Ramanathapuram(Dist) 623 517. TamilNadu, INDIA.
GST No.: 33AAYFA6470G1Z5

To

HOD,

Department of Biotechnology,

Kamaraj college of engineering and technology,

Virudhunagar.

Program Title: Value added course for 2nd year Bio Technology

Program module and tentative schedule:

DAY	TOPIC
Day-1	Introduction to algae and types & cultivation of algae
Day-2	Bio polymers extraction from algae & practical session
Day-3	Industrial visit to fisheries department Ramanathapuram & Ak seaweeds
Day-4	Value addition and commerce from seaweed and practical session
Day-5	Student presentation and validation

Fee structure : Rs. 1300 / Student

(Fees include TA & DA for speakers, program module seaweed raw material, fisheries department approval)

- Certificate will be provided for individual student

AK Seaweeds

R. Shiitha

AK SEAWEEDS 19/01/24
113/1A, Nochioorani Village,
Pirappan Valasai (Po),
Ramanathapuram - 623 516.
Tamilnadu, India.
Cell: 9600027197

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Resource Person Details

Name of Programme : Industry Certified Value Added Programme on "**ALGAL TECHNOLOGY AND APPLICATIONS**" from 5th to 8th and 12th February 2024

Name of Coordinator : Dr S.Karthikumar, Dr K.Geetha & Dr R.Shyam Kumar

1. To develop tools for deciding the resource persons for the value added program

S. No.	Class	Training Programme Planned	Offered by Department / TDP Cell	Industry / Institute Associated with, if any	Details of Internal Resources			Details of External Resource Persons		
					Name & official address, Email Id, Ph. No.	Expertise (Teaching, Research, Industry, Others, if any)	Expertise with respect to domain area / title of the programme	Name & official address, Email Id, Ph No.	Expertise (Teaching, Research, Industry, Others, if any)	Expertise with respect to domain area / title of the programme
1	II B.Tech	Algal Technology	Biotechnology Department Biotechnology Department	**AK Seaweeds,**	113/1A Nochiooram Villagae, Ramanathapuram (Dist) 623517, Tamil Nadu, India	-	-	**Mr. R.P.Rajadurai Jesudoss,** Manager, AK Seaweeds, Ramnadapuram, Tamil Nadu E.Mail: jesurajmad@gmail.com Ph: +919944390334	Has 7 years of training experience and is also the manager	Has 7 years of training experience

	Biotechnology								of the Industry	
2		Algal Cultivation and Biomass extraction		**Phycospora Breeding & Propagate**	15/16A, Sallimalai, GP Road, Ramanathapuram 623526, Tamil Nadu, India	-	-	**Mr M.Selva Kumar**, Technical Lead, Phycospora Breeding & Propagate, 15/16A, Sallimalai, GP Road, Ramanathapuram 623526 E.mail: selkumbsc@gmail.com Ph: +91 9943684175	Expert in cultivation of algae and converting the biomass into valuable products	Has many years of experience

Signature of the Coordinators

Dr K.Geetha, Dr S.Karthikumar, Dr R.Shyam Kumar

Signature of Training In-charge

Signature of Head

Dr R.Shyam Kumar

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DEPARTMENT OF BIOTECHNOLOGY

CIRCULAR

KAMARAJ / BT / 2023-24 / VAP-II BT Date: 02.02.2024

The Department of Biotechnology is going to organize an **Industry Certified Value Added Programme** on **"ALGAL TECHNOLOGY AND APPLICATIONS"** for **II year B.Tech Biotechnology students.** The 5 days course is scheduled from **5th to 8th and 12th February 2024.** The programme schedule for the VAP is given below:

PROGRAM SCHEDULE

DATE	9.00 am to 9.30 am	9.30 am to 10.50 am	11.10am to 12.50pm	1.30 pm to 3.00 pm	3.00 pm to 4.00 pm
05/02/2024	**Inaugural Session**	Introduction to Algae	Types of Algae	Cultivation of Micro algae	Cultivation of Macro algae
06/02/2024	Natural Bio polymers and their applications		Methods of Extraction of Bio polymers from algae	Hands-on Session on Bio polymer extraction	
07/02/2024	Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry				
08/02/2024	Value addition and Commerce from Seaweeds			Hands-on session	
12/02/2024	Student Presentation			Validation through test	**Valedictory Session**

PROGRAMME COORDINATORS
Dr K.Geetha, Dr S.Karthikumar, Dr R.Shyam Kumar

HoD/BT 2/2/24

PRINCIPAL
Dr. S. SENTHIL, M.E.,Ph.D.,
PRINCIPAL
KAMARAJ College of Engineering and Technology
(Autonomous)
S.P.G. Chidambara Nadar - C. Nagammal Campus,
S.P.G.C. Nagar, K. Vellakulam - 625 701.
(Near VIRUDHUNAGAR).

Copy to:
B.Tech.Biotechnology- II year B.Tech Class
BT Faculty members
Office Superintendent
To file

Course Code	Course Name	L	T	P	C
VAP	ALGAL TECHNOLOGY AND APPLICATIONS				2

1. Preamble

This course enables the students to

- Know about different types of algae and their diversification.
- Know about cultivation of micro and macro algae.
- Learn the application of algae in various biotechnological perspectives

2. Course Outcomes

After successful completion of the course,

CO.No.	Course Outcome	Knowledge Level
CO1	Explain the basics of algae, their importance, classification and diversity.	K2
CO2	Describe the algal characteristic features and their isolation.	K2
CO3	Summarize the micro algal cultivation methods and biomass production.	K2
CO4	Identify the macro algal distribution and biomass collections.	K3
CO5	Apply the algal systems in biotechnological product development.	K3

3. Course Syllabus **Total: 30 Hours**

UNIT I INTRODUCTION TO ALGAE 06

Algal diversity, seaweed rearing techniques, raft technology , reared seaweed, seaweed morphology and identification, seaweed seed preperation and development methods.

UNIT II CULTIVATION OF ALGAE 06

Brown and red algae, hydrocolloids from seaweed, alginate extraction from brown algae, application of alginates, agar extraction from red algae and its application, down stream methods in hydrocolloid extraction. Hands-on session: Extraction of alginates from brown algae, Extraction of agar from red algae.

UNIT III VALUE ADDITION USING ALGAE 06

Need of value addition, value addition of seaweeds, demand based approach on value addition , certification associated with value addition. Hands-on session: Value addition of seaweeds and extracted hydrocolloids.

UNIT IV COMMERCIALIZATION OF ALGAL PRODUCTS 06

Certifications and quality management. Commercialization of value added products. Promotion and marketing strategies. Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry.

UNIT V INDUSTRIAL SCALE UP 06

Government subsidies on seaweed farming and value addition, industrial scale up SOPs, seaweed park in Ramanathapuram. Hands-on session: Commercialization of value added products.

TEXT BOOKS:

1. Konur Ozcan, *Handbook of Algal Science, Technology and Medicine,* Academic Press, 2020.
2. Muthuarumugam Nagaraj, Shanmugam Kathiresan, S., *Applied Algal Biotechnology*, Nova Science Publishers, 2021.
3. Chojnacka Katarzyna, et al., *Algae Biomass: Characteristics and Applications: Towards algae-based products,* Vol. 8, Springer, 2018.

REFERENCES:

1. Becker, E. Wolfgang, *Microalgae: Biotechnology and Microbiology*, Vol. 10, Cambridge University Press, 1994.
2. Jayabalan Sangeetha, Devarajan Thangadurai, Sanyasi Elumalai and Shivasarana Chandrbanda Thimmappa, *Phycobiotechnology Biodiversity and Biotechnology of Algae and Algal Products for Food, Feed and Fuel*, CRC Press, 2021.
3. Trivedi, P.C., *Algal Biotechnology,* Pointer publishers, Jaipur, India, 2001

Programme Coordinators

Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar

HoD/BT

Dr R.Shyam Kumar

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Department of Biotechnology

Seventh BoS Meeting Minutes

Date : 30-09-2023

Time : 10.00 AM

Venue : CSE Conference Hall - I

Link (hybrid mode) : https://teams.microsoft.com/l/meetup-join/19%3a868e3ebf1da84821b67629edf5c504c6%40thread.tacv2/1695969183207?context=%7b%22Tid%22%3a%222666d91c-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%2253e97dde-b467-45ac-80a2-df98f8017534%22%7d

The following members were present:

S.No.	Name of the Expert	Designation	Capacity
1	Dr. S. Venkatesan	Professor & Head, Department of Petrochemical Technology, Bharathidasan Institute Of Technology (BIT) Campus, Tiruchirappalli- 620 024	Anna University Nominee
2	Dr. P. Suresh Kumar	Professor & Head, Department Of Biotechnology, University College Of Engineering, Bharathidasan Institute Of Technology Campus, Tiruchirappalli	Academic Council Nominee
3	Dr. R. Balakrishnaraja	Associate Professor and Head, Department Of Biotechnology, Bannari Amman Institute of Technology, Sathyamangalam	Academic Council Nominee
4	Mr. S. Seshan	Management Representative, The Peninsular Exports Company, Virudhunagar	Industrial Expert

5	Dr. Ilanila IP	Assistant Professor National Institute of Technology Calicut, NIT Campus – Calicut	Alumni

Internal Faculty Members of BoS			
S.No.	**Name of the Faculty**	**Designation**	**Signature**
1	Dr. R. Shyam Kumar	Professor and Head	
2	Dr. R. Baskaran	Associate Professor	
3	Dr. K. Geetha	Associate Professor	3/10/2023
4	Dr. S. Karthikumar	Associate Professor	
5	Dr. A. Ronaldo Anuf	Assistant Professor	3/10/23
6	Dr. D. Pradiba	Assistant Professor	3/10/23
7	Er. R. Amutha Lakshmi	Assistant Professor	3/10/23
8	Er. K. Chitradevi	Assistant Professor	03/10/23
9	Er. Karl Joseph Samuel	Assistant Professor	
10.	Er. A.Ganga	Assistant Professor	

007.01.00 : Welcome address by HoD

- Welcome address
- Dissemination of Vision and Mission statements of the Institution and the Department.
- Dissemination of PEO & PSO statements of the Program.

007.02.00 : Approval of 6th BoS Meeting Minutes & Action taken

Item No.	Suggestions of BoS Members in 6th BoS Meeting	Action Taken
006.04.01	Dr. P. Suresh Kumar, Academic Council Nominee suggested to include recent book editions in text and reference books. Dr. S. Venkatesan, Anna University Nominee suggested latest version of	The suggestions provided by the experts were taken and changes were made in the appropriate syllabus

	Separation process principles by Seader and Henly for this course	
006.04.01	Dr. P. Suresh Kumar, Academic Council Nominee suggested to include updated text, reference books and e – book links in the syllabus	Appropriate text book reference and e-book links were introduced
006.04.01	Dr. Balakrishnaraja, Academic Council Nominee suggested to include the topic "Media design and optimization simulation using MATLAB" in the syllabus. He also insisted to reframe the title of second unit	The changes were done in the modified syllabus
006.04.01	Members enquired the availability of animal handling facility in the department	Visit to near by Animal handling facility was added as an activity in the Laboratory
006.04.01	Dr. Balakrishnaraja, Academic Council , Simulation studies using MATLAB in the course.	The MATLAB based exercises are included in the Theory course
006.04.01	Dr. S. Venkatesan, Anna University Nominee asked to remove Unit Operations paper and instead include Intellectual Property Rights course.	The Paper was introduced
006.04.01	Mr. S. Seshan, Industrial Expert suggested to include International Regulatory affairs, regulations such as USFDA in the Food Safety Laws and Regulation syllabus.	The topic was introduced in the syllabus
006.05.03	Mr. S. Seshan enquired about the Management related value added courses (GLP, GMP) offered by the department and he also suggested to include the such courses as it would improve the job opportunities	Efforts were taken to provide such courses for final year students

- All the BoS members approved the minutes of the 6th BoS meeting

007.03.00 : Discussion and approval of

007.03.01 : Proposed Curriculum and Syllabi for VII and VIII Semester

VII Semester

Name of the Course	Suggestions from BoS members
Downstream Processing	➢ Dr. R. Balakrishnaraja, suggested that Case study-based assignments can be assigned as activity. The course in charge justified that Out of the three assignments, one assignment is given as case study. ➢ Dr. Ilanila IP enquired whether in Unit-V there is Scope for including Downstream purification of Pharmaceutical product in syllabus ➢ The HoD informed that the same has been included in biopharmaceutical syllabus ➢ Dr. R. Balakrishnaraja, suggested to include text book by Seader and tatum
Downstream Processing Laboratory	➢ References needs to be updated with reprints
Computational Biology Laboratory	➢ Dr.R.Balakrishnaraja, Appreciated for including R – Programming. He also insisted to teach Theory content of R programming as one credit course. Alumni help may be sought in this regard.
Mini Project Work	➢ Dr.R.Balakrishnaraja, – enquired about the process of problem identification for mini project work. He suggested to identify problems from nearby industries. HOD explained that the same procedure is followed by the department. Three-member committee is constituted to monitor the progress of the same. ➢ Dr.Ilanila IP enquired the duration of the project in the syllabus. ➢ Dr.R.Balakrishnaraja, suggested that the students have to work after regular working hours to arrive at better results. ➢ Dr.Suresh Kumar enquired about the total credits for the R2021.

VIII Semester

Name of the Course	Suggestions from BoS members
Project Work	➢ Dr.Balakrishnaraja, enuired about the total number of credits and the total hours allocated for the project work ➢ Dr.Suresh Kumar, enquired whether the project would be Inhouse projects or industry projects. He also enquired about the Review system. ➢ The HoD and BoS Coordinator informed that the preference for project will be based on student

	interest. HoD also informed that the review will be done periodically by a three-member committee constituted by the HoD

007.03.02 : Management Courses – TQM & PoM (MECH & MTRE)

007.03.03 : List of Open Elective 1,2,3 & 4 courses offered

Name of the Course	Offered to	Suggestions from BoS members
BASICS OF BIOINFORMATICS	CSE, ADS, ECE, IT	➢ Dr.Ilanila IP, suggested that Unit I and II can be reframed to add more details related to central dogma concepts and other basic concepts related to biotechnology.
INTRODUCTION TO FOOD MANUFACTURING	CSE, ADS, ECE, IT	➢ Dr.Balakrishnaraja and Dr.Illanila IP, suggested that the syllabus is too complex. It will be difficult for the students from other branches. ➢ Question paper has to be framed carefully taking into consideration the course is studied by students from other branches.
BASICS OF NANOBIOTECHNOLOGY	All Branches	➢ The Board of Studies experts proposed that the syllabus, being an open elective, may be reduced to accommodate students from various branches. ➢ Dr. Balakrishnaraja Suggested that Unit - 5 title can be reframed as Nanobiotechnology in Medicine.
BIOLOGY FOR ENGINEERS	All Branches	All the members appreciated the syllabus and approved it.
TESTING OF BIOLOGICAL MATERIALS	All Branches	➢ Dr.Ilanila, enquired whether Unit II will be taught by person from Mechanical Engineering background. ➢ HoD informed that for such topics guest lectures may be arranged.
PRINCIPLES OF FOOD PROCESSING	All Branches	➢ All the members appreciated the syllabus and approved it

007.03.04 : List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses

NPTEL COURSE	Equivalent Professional elective course

Novel Technologies for Food Processing and Shelf Life Extension	Principles of Food Preservation
Post Harvest Operations and Processing of Fruits, Vegetables, Spices and Plantation Crop Products	Post Harvest Technology
Environmental Biotechnology	Environmental Biotechnology

- The members accepted the courses requested for equivalence.

007.03.05 : Human Values and Ethics Courses

- The members appreciated the contents in the syllabus. They commented that the syllabus was in line with the initiative from AICTE.
- Dr.Bala also enquired about the number of faculty members who have completed the UHV modules.
- HoD informed that 50% of the faculty members in the department have completed the course. The members appreciated the efforts.

007.04.00 : ITEMS FOR RATIFICATION

007.04.01 : Changes or Corrections in the existing Curriculum of R2020 and R2021

NIL

007.04.02 : NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates

- IV Year B. Tech Biotechnology (2020-2024 Batch, R2020) has a mandatory 2 Online Courses for 6 Credits.
- 25 students of the total 48 students (52.03%) have completed the required two courses for six credits.

Subject Code	Subject Name	Month & Year	No of Students Enrolled	No. of students Passed	Pass %
noc22-ag13	Post Harvest Operations and Processing of Fruits, Vegetables, Spices and Plantation Crop Products	Oct 2022	15	11	73.33
noc22-ag14	Soil Fertility And Fertilizers	Oct 2022	5	5	100
noc22-bt57	Environmental Biotechnology	Oct 2022	28	28	100

noc23-ag02	Novel Technologies For Food Processing And Shelf Life Extension	Apr 2023	38	20	52.63
noc23-ce12	Water and waste water treatment	Apr 2023	7	6	85.71
noc23-ce10	Applied Environmental Microbiology	Apr 2023	3	2	66.67

- The following students have achieved Topper in their respective subjects

S. No	Roll Number	Student Name	Subject Code	Subject Name	Month & Year	Topper %
1.	20UBT023	VARSHINIRAJI.P	noc22-bt57	Environmental Biotechnology	Oct 2022	1
2.	20UBT041	MINUSHA.S	noc22-bt57	Environmental Biotechnology	Oct 2022	5
3.	20UBT027	SUBHIKSHA.S	noc23-ce10	Applied Environmental Microbiology	Apr 2023	5

- 22 students of the total 48 students (45.83%) have completed one course and earned 3 credits and 1 student (2.08%) have not completed any courses.
- The students who are short of required credits have been recommended to register from the following courses this semester.

S. No	Course ID	Name of the Course
1.	noc23_ag13	Soil Fertility And Fertilizers
2.	noc23-ag11	Advanced Aquaculture Technology
3.	noc23-ag18	Dairy And Food Process And Products Technology
4.	noc23-bt37	Drug Delivery: Principles And Engineering

- The Controller of Examination will conduct the examination for students who fail this semester.

007.04.03 : Curriculum feedback and action taken if any

- The feedback received from Students, Faculty and Alumni were shared with the BOS members. The action taken were appreciated by the members.

007.04.04 : Value Added Courses offered – ratification if any

- HOD presented the details about the Industry Value added course offered for III Year students on the topic Comprehensive trail in revolutionary drug

- design: Pre-clinical research methodology (30 hours) during the current semester and requested for ratification.
- Dr. Bala enquired about the total credits offered for the program.
- HoD Informed that the program was offered 2 credits.

007.05.00: Information about the (Points Discussed in the following)

Item No.	Description	Suggestions / Comments from the BoS Members
007.05.01	Number of students doing Honours / Honours with Specialization / Minors and its respective courses	➢ The HOD Presented the number of students doing Honours/ Honours with specialization/ Minors and its respective courses ➢ Dr.Balakrishnaraja enquired about the poor turnouts in enrolment for Minor degree courses. ➢ HoD informed that most of the students are interested in core placements and research avenues.
007.05.02	Student Internship Completion details	The HOD shared the statistical data of the student internship/ Inplant training details for R2020 & R2021 ➢ 100 % of the students of R2020 have completed the student internship/ Inplant training ➢ 98% of the students from R2021 completed the Internship of 15 days duration during the Academic Year 2022-2023.
007.05.03	Pass Percentage of students	➢ The HOD Presented the Pass percentage year wise and course wise. ➢ The BOS members appreciated the results of the students.
007.05.04	Value Added Courses offered/ Planned for the academic year : 2023 – 2024	The HOD Presented the Value added course planned for the academic year : 2023-2024 The following courses were planned for Current Second year Students ➢ *Value Added Course on Biofertilizer and Biopesticide Production* ➢ *Value Added Course on Algae for Health and Wealth* ➢ *Value Added Course on Food Safety Management System*

		➢ Members suggested that course related to Food Value addition and Quality policy can be conducted to the students at Second year. The Value added courses Coordinators shared that for final years "One-week hands on training related to laboratory techniques" (Finishing School Concept) will be conducted. ➢ The experts suggested that, if feasible certification course related to ISO Internal Audit (Food safety management) can be handled for Final year students.
007.05.05	NBA eSAR / status /compliance preparation and its information	➢ The HOD shared the details regarding the Visit by NBA expert committee. ➢ The strength and Weakness pointed out by the NBA committee was shared with the BoS Members
007.05.06	Student Internship details (between 6th and 7th meeting)	The HoD shared the statistical data of the student internship/ Inplant training details for R2020 & R2021. ➢ 100 % of the students of R2020 have completed the student internship/ Inplant training ➢ 98% of the students from R2021 completed the Internship of 15 days duration during the Academic Year 2022-2023.

007.06.00 : Any other Item

➢ Request for ratification of Mission statements as per NBA Criterion I. The members suggested to reframe the mission statement in to two or three individual statements in alignment with the existing mission statements.

007.07.00 : Vote of Thanks

➢ The meeting ended with the Vote of Thanks by Dr. K. Geetha, Associate Professor, Department of Biotechnology, Kamaraj College of Engineering and Technology, Virudhunagar.

BoS Coordinator
(Dr.A.Ronaldo Anuf)

BoS Chairman
(Dr.R.Shyam Kumr)
HoD /BT

HOD
DEPT. OF BIOTECHNOLOGY
Kamaraj College of Engineering & Technology

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MINUTES OF THE MEETING TO APPROVE AND RECOMMEND THE VALUE ADDED PROGRAM EXAMINATION FOR CREDIT

Date : 20/02/2024

Time : 4.10 PM to 4.30 PM

Venue: EduSat Hall, KCET

Members Present

1. Dr.R.Shyam Kumar (Head/BT & Convener)
2. Dr.K.Geetha (Associate Professor / BT & Member; Chairperson, II BT)
3. Dr.S.Karthikumar (Associate Professor / BT & Member)

Agenda

1. Welcome address – Dr.R.Shyam Kumar
2. Dissemination of the report of Industry Certified Value-Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" – Dr.K.Geetha.
3. Dissemination of the Value Added Programme Guidelines in R2021 – Dr.K.Geetha, CP/II BT.
4. Dissemination of the report on mode of conduct of examination and evaluation system Dr.S.Karthikumar.
5. Approval of the program conduct and examination evaluation system to issue the credit as per the regulation R2021
6. Any other items with the approval of convener

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Item No.	Agenda	Discussion and Resolution
1	Welcome address	Dr.R.Shyam Kumar, Head and convener of the meeting welcomed the gathering and gave a brief introduction about the purpose and agenda of the meeting
2	Dissemination of the report of value added Program	Dr.K.Geetha, Associate professor and one of the coordinator of the event explained the objective, need, target participant, duration and expected outcome of the program organized "Industry certified value added programme on ALGAL TECHNOLOGY AND APPLICATIONS" during 5th to 8th and 12th February 2024 (5 days). The program was conducted for 2nd year B.Tech. Biotechnology as per the regulation of R2021. Biotechnology related industry personals from AK Seaweeds, Ramnadapuram, Tamil Nadu, provided technical training to the students during the programme. Detailed event report is attached.
3	Dissemination of the Value -added Programme Guidelines in R2021	Dr K.Geetha, Associate Professor and Chairperson of II BT, disseminated the points discussed regarding the change in the value added programme during the BOS meeting. The proposed syllabus for value added courses "ALGAL TECHNOLOGY AND

		APPLICATIONS" was accepted by Anna University Nominee through mail communication.
4	Dissemination of the report on mode of conduct of examination and evaluation system	Dr.S.Karthikumar, Associate Professor, BT explained the mode of conduct of examination. At the end of the program students were asked to appear for an internal exam in online mode. Later a main exam covering 25 MCQs from Algal Technology was conducted in physical mode with proper invigilation. The marks scored by each student were presented to the committee members for the approval.
5	Approval of the program conduct and examination evaluation system to issue the credit as per the regulation R2021	The three member committee (Dr.R.Shyam Kumar, Dr.K.Geetha and Dr.S.Karthikumar) was formed to scrutinize the value added program exam results to approve and recommend for credit. The committee members verified the results and forwarded to Controller of Examination through Dean Academics to consider for Credit.
6	Any other items with the approval of convener	Hence, no members raised any further clarification the meeting was end and the reports were forwarded for further process.

Dr.R.Shyam Kumar
HoD/BT and Convener

Dr.K.Geetha
Associate Professor/BT, Member & II BT CP

Dr.S.Karthikumar
Associate Professor/BT & Member

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DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added Programme
On
ALGAL TECHNOLOGY AND APPLICATIONS
5th to 8th and 12th February 2024

PHOTOS

Day 1

Inauguration session

Sessions on the basic Introduction Theory behind Algae and its classification by Mr. Selva Kumar

Seaweed samples

Day 2

Session on Applications of seaweed by Mr. Jesudas

Hands-on session on preparation of agar agar and alginate

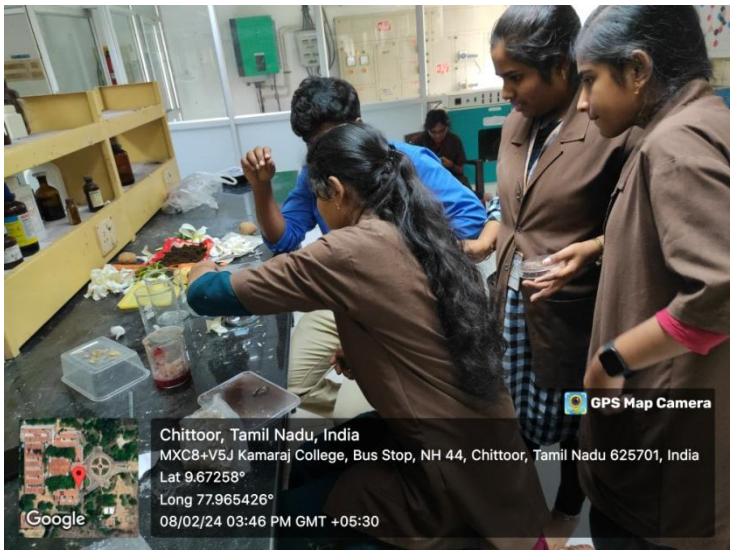
Day 3

Industrial visit to AK seaweed, Ramnathapuram

Automated production unit under the Fishery Department of Rameswaram

Visit to seaweed cultivation site

Day 4



Preparation of Algal based Products

Day 5

Programme Coordinators

Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar

HoD/BT

Dr R.Shyam Kumar

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This is to certify that ~~Mr~~./Ms. PRIYADHARSHINI. L

2nd Year B.Tech.Biotechnology (Reg.No. 920422214023) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 88 % in the assessment exam.

Manager
AK Seaweeds

Coordinator(s)

HoD/BT

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This is to certify that Mr./~~Ms~~. PUGAZHENTHI. R

2nd Year B.Tech.Biotechnology (Reg.No. 920422214024) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 86 % in the assessment exam.

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This is to certify that Mr./~~Ms~~. RAGUL.K

2nd Year B.Tech.Biotechnology (Reg.No. 920422214025) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 90 % in the assessment exam.

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This is to certify that ~~Mr~~./Ms. SAKTHI SHIVANI. K
2nd Year B.Tech.Biotechnology (Reg.No. 920422214026) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 88 % in the assessment exam.

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This is to certify that ~~Mr~~./Ms. SAKTHI SHYAMALA. M.S
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2nd Year B.Tech.Biotechnology (Reg.No. 920422214028) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 88 % in the assessment exam.

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This is to certify that Mr./~~Ms~~. SELVA RUBAN. M

2nd Year B.Tech.Biotechnology (Reg.No. 920422214031) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 88% in the assessment exam.

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2nd Year B.Tech.Biotechnology (Reg.No. 920422214032) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 86 % in the assessment exam.

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2nd Year B.Tech.Biotechnology (Reg.No. 920422214033) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 86% in the assessment exam.

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2nd Year B.Tech.Biotechnology (Reg.No. 920422214034) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 88 % in the assessment exam.

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2nd Year B.Tech.Biotechnology (Reg.No. 920422214035) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 86% in the assessment exam.

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This is to certify that ~~Mr~~./Ms. SURUTHI. N

2nd Year B.Tech.Biotechnology (Reg.No. 920422214036) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 88 % in the assessment exam.

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This is to certify that ~~Mr~~./Ms. SWETHA. S

2nd Year B.Tech.Biotechnology (Reg.No. 920422214037) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 86 % in the assessment exam.

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This is to certify that ~~Mr~~./Ms. VAISHNAVI RISHIKAA. J
2nd Year B.Tech.Biotechnology (Reg.No. 9204 22214038) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 86 % in the assessment exam.

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This is to certify that ~~Mr~~./Ms. VARSHINI.S

2nd Year B.Tech.Biotechnology (Reg.No. 920422214039) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 88 % in the assessment exam.

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This is to certify that Mr./~~Ms~~. VIBHU PURUSHOTH. V.K

2nd Year B.Tech.Biotechnology (Reg.No. 9204 22214040) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 86% in the assessment exam.

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This is to certify that Mr./~~Ms~~. VISHNUVARDHAN. R.M

2nd Year B.Tech.Biotechnology (Reg.No. 920422214041) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 86% in the assessment exam.

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This is to certify that ~~Mr.~~/Ms. SARON MERLINE
2nd Year B.Tech.Biotechnology (Reg.No. 92042214029) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5th - 9th February 2024 and secured 88 % in the assessment exam.

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DEPARTMENT OF BIOTECHNOLOGY

CIRCULAR

KAMARAJ / BT / 2023-24 / VAP-II BT Date: 16.02.2024

Dear Students,

You are requested to join the online meeting link to attend **Industry Certified VAP- ALGAL TECHNOLOGY AND APPLICATIONS: EXTERNAL ASSESSMENT TEST 2023-24** on **19/02/2024 at 3.10 pm**.

All students are instructed to bring Laptop to take the exam. Join the link 10 min before the exam timing. Only those who attended the VAP completely are eligible to take the test. Hence only those students may join the link and attend the test. The test will be conducted in proctored mode in the department.

Link: https://teams.microsoft.com/l/meetup-join/19%3asRdz7TjOLfcKtopJ-tUlgNAVOm2Dc9jTo2GtkJSQOIs1%40thread.tacv2/1708314543135?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%224948241d-c837-4241-ab0b-de08e44460f9%22%7d

PROGRAMME COORDINATORS
Dr S.Karthikumar
Dr K.Geetha
Dr R.Shyam Kumar

HoD/BT
Dr R.Shyam Kumar

Copy to:

B.Tech.Biotechnology- II year B.Tech Class
BT Faculty members
Office Superintendent
To file

Intimation about External Evaluation - Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS"- reg

Geetha.K <geethabt@kamarajengg.edu.in>

Fri 2/16/2024 10:49 AM

To:22UBT <22ubt@kamarajengg.edu.in>
Cc:Karthikumar.S <karthikumarbt@kamarajengg.edu.in>;HODBT <hodbt@kamarajengg.edu.in>;jesuramnad@gmail.com <jesuramnad@gmail.com>;DEAN-ACADEMIC <deanac@kamarajengg.edu.in>

Dear Students,

The External Evaluation for the Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" will be conducted using MS Forms Quiz platform. All students who have attended the VAP must take the test and score 80% and above to get certified. The test comprises of 25 questions carrying 1 mark each. You have 25 minutes to complete the test.

Exam details:

Date: 19/02/2024
Time: 3.20pm - 3.50pm.
Total Marks: 25

Come prepared for the exam.

Thank you,

Regards,

Dr K.Geetha
Associate Professor
Department of Biotechnology
Kamaraj College of Engineering & Technology
S.P.G.C. Nagar, K.Vellakulam-625701,
Near Virudhunagar, Madurai Dist.
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Industry Certified Value Added Programme

On

"ALGAL TECHNOLOGY AND APPLICATIONS"

5th to 8th and 12th February 2024

ONLINE PROCTORED EXTERNAL EXAMINATION – 19/02/2024

PHOTOS

Photo 1: Online Meeting for proctored External exam – Online mode

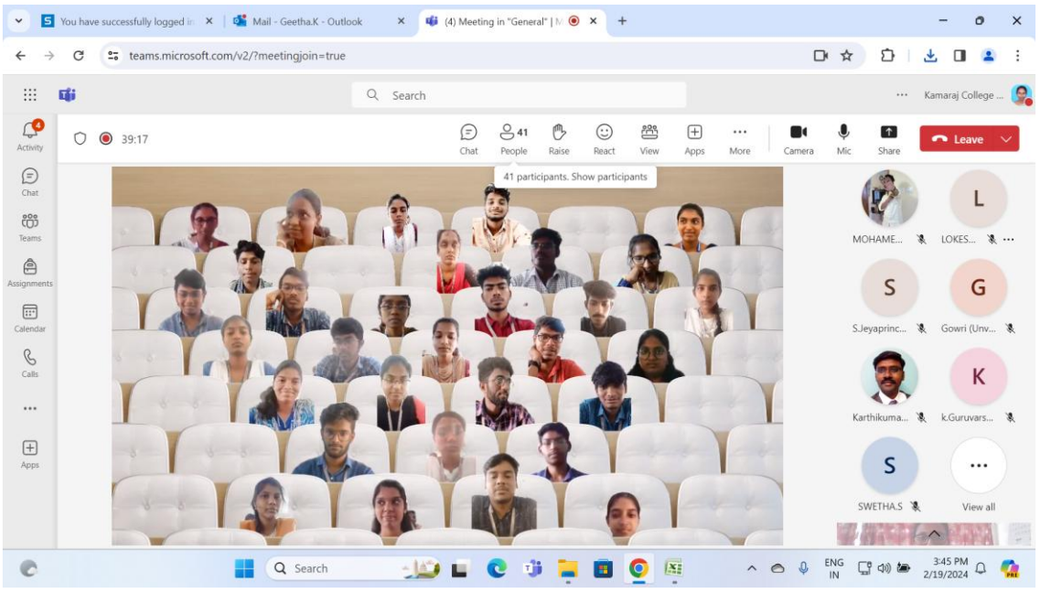


Photo 2, 3 & 4: Students attending Online proctored mode external exam for Value Added Course

Programme Coordinators

Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar

HoD/BT

Dr R.Shyam Kumar

Full Name	User Actio	Timestamp
Geetha.K	Joined	2/19/24, 3:07:46 PM
MANOJ HA	Joined	2/19/24, 3:07:54 PM
Abinanthai	Joined	2/19/24, 3:08:10 PM
KEERTHAN	Joined	2/19/24, 3:08:18 PM
S.Jeyaprinc	Joined	2/19/24, 3:08:19 PM
MOHAMEI	Joined	2/19/24, 3:08:19 PM
M.Helen gi	Joined	2/19/24, 3:08:21 PM
Gowri (Un	Joined	2/19/24, 3:08:27 PM
AKSHAYA.I	Joined	2/19/24, 3:08:29 PM
Nancy (Un	Joined	2/19/24, 3:08:59 PM
DEVI.M	Joined	2/19/24, 3:09:40 PM
DEVI.M	Left	2/19/24, 3:40:45 PM
DEVI.M	Joined	2/19/24, 3:43:48 PM
NAVEEN.B	Joined	2/19/24, 3:10:08 PM
Karthikum.	Joined	2/19/24, 3:10:39 PM
SRUTHI.N	Joined	2/19/24, 3:11:03 PM
selva muru	Joined	2/19/24, 3:11:50 PM
selva muru	Left	2/19/24, 3:39:17 PM
LOKESHRA	Joined	2/19/24, 3:12:08 PM
k.Guruvars	Joined	2/19/24, 3:12:27 PM
SARON ME	Joined	2/19/24, 3:12:42 PM
v.nageswa	Joined	2/19/24, 3:12:57 PM
SAKTHI SH'	Joined	2/19/24, 3:13:24 PM
HARESH.V.	Joined	2/19/24, 3:13:35 PM
Balaji R (Ur	Joined	2/19/24, 3:13:41 PM
SANKARAF	Joined	2/19/24, 3:13:47 PM
K.Ragul (Ur	Joined	2/19/24, 3:14:06 PM
PUGAZHEN	Joined	2/19/24, 3:15:17 PM
sakthi shiv.	Joined	2/19/24, 3:15:36 PM
sakthi shiv.	Left	2/19/24, 3:44:08 PM
SWETHA.S	Joined	2/19/24, 3:15:44 PM
Vaishnavi I	Joined	2/19/24, 3:16:11 PM
PRIYADHA	Joined	2/19/24, 3:19:19 PM
VARSHINI.:	Joined	2/19/24, 3:34:46 PM
SUMATHI.I	Joined	2/19/24, 3:35:34 PM
VIBHUPUR	Joined	2/19/24, 3:38:00 PM
JANAKAR.S	Joined	2/19/24, 3:38:31 PM
JANAKAR.S	Left	2/19/24, 3:41:32 PM
JANAKAR.S	Joined	2/19/24, 3:41:52 PM
selva rubar	Joined	2/19/24, 3:40:24 PM
SELVA MU	Joined	2/19/24, 3:41:00 PM
SHUNMUG	Joined	2/19/24, 3:41:58 PM
PRAKITHA.	Joined	2/19/24, 3:42:48 PM
N. GENGES	Joined	2/19/24, 3:42:52 PM
PEBINA.A	Joined	2/19/24, 3:43:03 PM
sakthi shiv.	Joined	2/19/24, 3:43:45 PM
PARKAVI N	Joined	2/19/24, 3:43:47 PM

Dr K.Geetha Dr S.Karthikumar Dr R.Shyam Kumar

VAP- ALGAL TECHNOLOGY AND APPLICATIONS: EXTERNAL ASSESSMENT TEST 2023-24

Feb 19, 2024

Answer all question

Total: 25 Points

* Required

* This form will record your name, please fill your name.

1. Name *

2. Roll No *

3. Register No *

4. Class *

5. Date *

25 x 1 = 25 Marks

Answer all questions

6. 1. Spot the green marine algae * (1 Point)

- a) Sargassam sp
- b) Gracillaria sp
- c) Turbeneria sp
- d) Ulva sp

7. 2. Extraction temperature of agar agar ____ ◦C * (1 Point)

- a) 100 – 110
- b) 60-70
- c) 70-80
- d) 130-140

8. 3. 1) Separation of agar from bounded water after freezing is done by * (1 Point)

- a) Filteration
- b) Freeze thawing
- c) Gravity separation
- d) Acid precipitation

9. 4. Central nodal institute working on algal research * (1 Point)

- a) CMFRI
- b) CFTRI
- c) CSMCRI
- d) CECRI

10. 5. Model agar and carrageenan extraction unit at Mandapam, Tamil Nadu was governed under * (1 Point)

- a) State agriculture department
- b) State fisheries department
- c) State coastal department
- d) State gulf of mannar development department

11. 6. Carrageenan was extracted from * (1 Point)

- a) Ulva sp
- b) Kappaphycus sp
- c) Gelidium sp
- d) Sargassam sp

12. 7. Spot the cultivable red algae * (1 Point)

- A) Sargassam sp
- B) Gelidium sp
- C) Kappaphycus sp
- D) Ulva sp

13. 8. Kappaphycus seaweed is also termed us _____ , based on its patent. * (1 Point)

- a) Pepsi seaweed
- b) Aquaagri seaweed
- c) Grand seaweed
- d) Itc seaweed

14. 9. Alginate recovery from brown algae extracted solution is done by * (1 Point)

- a) Alkali precipitation
- b) Acid precipitation
- c) Centrifugal force
- d) Freeze thawing

15. 10. E406 was assigned to * (1 Point)

- a) Sodium alginate
- b) Agar agar
- c) Caragennan
- d) Alginic acid

16. 11. Alginate, agar agar, carrageenan were grouped by FSSAI under * (1 Point)

- a) Preservative
- b) Colorant
- c) Emulsifier
- d) Acidifier

17. 12. Product to be sold among Islamic people should hold * (1 Point)

- a) Kosher certificate
- b) ISO certificate
- c) Fssai certificate
- d) Halal certificate

18. 13. Jews prefer _____ certified products * (1 Point)

- a) Kosher
- b) BRC
- c) Halal
- d) Iso

19. 14. Alginates are extracted from * (1 Point)

- a) Brown seaweed
- b) Red seaweed
- c) Green seaweed
- d) Micro algae

20. 15. Cough syrup suspension consist of _____ as an emulsifier * (1 Point)

- a) Sodium alginate
- b) Magnesium alginate
- c) Agar agar
- d) Alginic acid

21. 16. _____ is used for teeth mold making * (1 Point)

- a) Sodium alginate
- b) Magnesium alginate
- c) Potassium alginate
- d) Calcium alginate

22. 17. Alkali used in alginate extraction is * (1 Point)

- a) Sodium carbonate
- b) Sodium bicarbonate
- c) Sodium hydroxide
- d) Sodium sulphate

23. 18. Agar is extracted from * (1 Point)

- a) Red algae
- b) Green algae
- c) Brown algae
- d) Sea grass

24. 19. On raft cultivation distance between two seedling rope should be _____ * (1 Point)

- a) 6 inches
- b) 12 inches
- c) 3inches
- d) 24 inches

25. 20. Cultivation period of Kappaphycus sp on raft will last for _____ days * (1 Point)

- a) 55
- b) 45
- c) 65
- d) 35

26. 21. Carrageenan is widely used in _____ * (1 Point)

- a) Cosmetics
- b) Ice cream
- c) Yoghurt
- d) lipsticks

27. 22. Agar food grade material should posses the following mandate certificate to be sold in India * (1 Point)

- a) ISO
- b) FSSAI
- c) Halal
- d) GMP

28. 23. Green seaweeds are rich in * (1 Point)

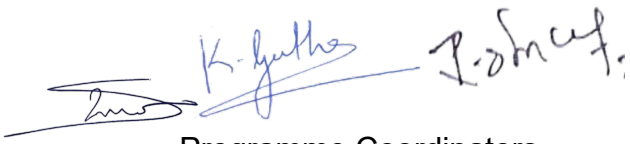
- a) Carbohydrate
- b) Protein
- c) Lipids
- d) Vitamins

29. 24. Blue green algae is also termed us * (1 Point)

- a) Hematococcus
- b) Spirulina
- c) Azolla
- d) Ulva

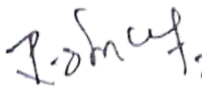
30. 25. Commercial grades of agar is diversified on the base of * (1 Point)

- a) Color
- b) Gel strength
- c) Flavor
- d) Bleaching percentage



Programme Coordinators

Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar



HoD/BT

Dr R.Shyam Kumar

KAMARAJ®
COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added Programme on

"ALGAL TECHNOLOGY AND APPLICATIONS"

5th to 8th and 12th February 2024

EVALUATION QUESTION PAPER WITH KEY

1) Spot the green marine algae
   a) Sargassam sp
   b) Gracillaria sp
   c) Turbeneria sp
   d) Ulva sp√
2) Extraction temperature of agar agar _____ ◦C
   a) 100 – 110√
   b) 60-70
   c) 70-80
   d) 130-140
3) Separation of agar from bounded water after freezing is done by
   a) Filteration
   b) Freeze thawing√
   c) Gravity separation
   d) Acid precipitation
4) Central nodel institute working on algal research
   a) CMFRI
   b) CFTRI
   c) CSMCRI√
   d) CECRI
5) Model agar and carrageenan extraction unit at mandapam Tamilnadu was governed under
   a) State agriculture department
   b) State fisheries department√
   c) State coastal department
   d) State gulf of mannar development department
6) Carrageenan was extracted from
   a) Ulva sp
   b) Kappaphycus sp√
   c) Gelidium sp
   d) Sargassam sp
7) Spot the cultivable red algae
   A) Sargassam sp
   B) Gelidium sp
   C) Kappaphycus sp√
   D) Ulva sp
8) Kappaphycus seaweed is also termed us _____ , based on its patent.
   a) Pepsi seaweed√
   b) Aquaagri seaweed
   c) Grand seaweed
   d) Itc seaweed
9) Alginate recovery from brown algae extracted solution is done by
   a) Alkali precipitation
   b) Acid precipitation√
   c) Centrifugal force
   d) Freeze thawing
10) E406 was assigned to
   a) Sodium alginate

b) Agar agar√
c) Caragennan
d) Alginic acid

11) Alginate, agar agar, carrageenan were grouped by FSSAI under
a) Preservative
b) Colorant
c) Emulsifier√
d) Acidifier

12) Product to be sold among Islamic people should hold
a) Kosher certificate
b) ISO certificate
c) Fssai certificate
d) Halal certificate√

13) Jews prefer _____ certified products
a) Kosher √
b) BRC
c) Halal
d) Iso

14) Alginates are extracted from
a) Brown seaweed√
b) Red seaweed
c) Green seaweed
d) Micro algae

15) Cough syrup suspension consist of _____ as a emulsifier
a) Sodium alginate
b) Magnesium alginate
c) Agar agar
d) Alginic acid√

16) _____ is used for teeth mold making
a) Sodium alginate
b) Magnesium alginate√
c) Potassium alginate
d) Calcium alginate

17) Alkali used in alginate extraction is
a) Sodium carbonate√
b) Sodium bicarbonate
c) Sodium hydroxide
d) Sodium sulphate

18) Agar is extracted from
a) Red algae√
b) Green algae
c) Brown algae
d) Sea grass

19) On raft cultivation distance between two seedling rope should be _____
a) 6 inches√
b) 12 inches
c) 3inches
d) 24 inches

20) Cultivation period of kappaphycus sp on raft will last for _____ days
a) 55
b) 45√
c) 65
d) 35

21) Carrageenan is widely used in _____
a) Cosmetics
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c) Yoghurt
d) lipsticks

22) Agar food grade material should posses the following mandate certificate to be sold in India
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b) Protein√
c) Lipids
d) Vitamins

24) Blue green algae is also termed us
a) Hematococcus
b) Spirulina√
c) Azolla
d) Ulva

25) Commercial grades of agar is diversified on the base of
a) Color
b) Gel strength √
c) Flavor
d) Bleaching percentage

Programme Coordinators
Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar

HoD/BT
Dr R.Shyam Kumar

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DEPARTMENT OF BIOTECHNOLOGY
Industry Certified Value Added Programme
On
ALGAL TECHNOLOGY AND APPLICATIONS
05/02/2024 to 12/02/2024
Attendance

S.No.	REG NO	ROLL NO	Student Name	05.02.2024		06.02.2024		07.02.2024		08.02.2024		12.02.2024		19/2/24
			Session	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	AN
1	920422214001	22UB	ARUNANTHANI K											
2	920422214002	22UB	AKSHAYA B R											
3	920422214003	22UB	BALAJI R											
4	920422214004	22UB	DEVI M											
5	920422214005	22UB	NAGENGESWARI											
6	920422214006	22UB	KOWRI S											
7	920422214007	22UB	GURUVARSHINI K											
8	920422214008	22UB	HARISH V N											
9	920422214009	22UB	WHELLEN GRACELIN JEY											
10	920422214010	22UB	JAYAKAR S N											
11	920422214011	22UB	JEYAFRINCY S											
12	920422214012	22UB	KEERTHANA N											
13	920422214013	22UB	LOKESHRAM C											
14	920422214014	22UB	MANOJHARISH B											
15	920422214015	22UB	MOHAMED AASIM											
16	920422214016	22UB	NAGESWARAN V											
17	920422214017	22UB	NAMBEESWARI J											
18	920422214018	22UB	NANCY G											
19	920422214019	22UB	NAVEEN D J											

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DEPARTMENT OF BIOTECHNOLOGY
Industry Certified Value Added Programme
On
ALGAL TECHNOLOGY AND APPLICATIONS
05/02/2024 to 09/02/2024
Attendance

S.No.	REG NO	ROLL NO	Student Name	05.02.2024		06.02.2024		07.02.2024		08.02.2024		12.02.2024		19.2.24
20	920422214020	22UBT0[illegible]	PARKAVI NANTHINI S	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]
21	920422214021	22UBT010	PERINA A	A.R.f.	A.R.f.	A.R.f.	A.R.f.	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	A.R.f.
22	920422214022	22UBT039	PRAKITHA S	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]
23	920422214023	22UBT0[illegible]	PRIYADHARSHINI I	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]
24	920422214024	22UBT0[illegible]	PUGAZHENTHI R	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]
25	920422214025	22UBT015	RAGUL K	K.R.J	K.R.J	K.R.J	K.R.J	K.R.J	K.R.J	[signature]	[signature]	[signature]	[signature]	K.R.J
26	920422214026	22UBT0[illegible]	SAKTHI SHIVANI K	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]
27	920422214027	22UBT0[illegible]	SAKTHI SHYAMALA M S	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	AB	AB	[signature]	[signature]	[signature]
28	920422214028	22UBT034	SANKARAPANDIAN P	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]
29	920422214029	22UBT0[illegible]	SARON MERLINE	J. Saron	J. Saron	J. Saron	J. Saron	J. Saron	J. Saron	J. Saron	J. Saron	J. Saron	J. Saron	J. Saron
30	920422214030	22UBT0[illegible]	SELVA MURUGAN G	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]
31	920422214031	22UBT0[illegible]	SELVA RUBAN M	M. [signature]	M. [signature]	M. [signature]	M. [signature]	M. [signature]	M. [signature]	M. [signature]	M. [signature]	M. [signature]	M. [signature]	M. [signature]
32	920422214032	22UBT0[illegible]	SHARMILA R	R. Sharu	R. Sharu	R. Sharu	R. Sharu	R. Sharu	R. Sharu	R. Sharu	R. Shar	R. Sharu	[signature]	[signature]
33	920422214033	22UBT0[illegible]	SIBBI JAMES RAJA R	[signature]	[signature]	[signature]	[signature]	R. Sibi	R. Sibi	AB	AB	[signature]	[signature]	[signature]
34	920422214034	22UBT017	SHUNMUGHI K V	Shunmughi	Shunmughi	Shunmughi	Shunmughi	Shunmughi	Shunmughi	Shunmughi	Shunmughi	Shunmughi	Shunmughi	Shunmughi
35	920422214035	22UBT028	SUMATHI S	[signature]	[signature]	[signature]	[signature]	[signature]	Sumathi	[signature]	[signature]	[signature]	[signature]	[signature]
36	920422214036	22UBT0[illegible]	SURUTHI N	N. Suruthi	N. Suruthi	N. Suruthi	N. Suruthi	N. Suruthi	N. Suruthi	N. Suruthi	N. Suruthi	N. Suruthi	N. Suruthi	N. Suruthi
37	920422214037	22UBT0[illegible]	SWETHA S	S. Swetha	S. Swetha	S. Swetha	S. Swetha	Swetha	Swetha	Swetha	S. Swetha	S. Swetha	S. Swetha	S. Swetha
38	920422214038	22UBT0[illegible]	J VAISHNAVI RISHIKAA	J. Vaishnavi	J. Vaishnavi	J. Vaish	J. Vaish	J. Vaish	J. Vaish	J. Vaish	J. Vaish	J. Vaish	J. Vaish	J. Vaish
39	920422214039	22UBT0[illegible]	S VARSHINI	S. Varshini	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]

KAMARAJ

DEPARTMENT OF BIOTECHNOLOGY
Industry Certified Value Added Programme
On
ALGAL TECHNOLOGY AND APPLICATIONS
05/02/2024 to 09/02/2024
Attendance

S.No.	REG NO	ROLL NO	Student Name	05.02.2024		06.02.2024		07.02.2024		08.02.2024		12.02.2024		19.2.24
40	923422104040	22UBT056	V.K. VIDHU PURUSHOTH											
41	923422104041	22UBT021	VISHNUVARDHAN RM											
	PROGRAMME CO-ORDINATOR SIGNATURE													

19/2/24

Programme Coordinators

Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar

HoD/BT

Dr R.Shyam Kumar

KAMARAJ

DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added Programme

On

ALGAL TECHNOLOGY AND APPLICATIONS

05/02/2024 to 08/02/2024 & 12/02/2024

Attendance

S.No.	REG NO	ROLL NO	Student Name	05.02.2024		06.02.2024		07.02.2024		08.02.2024		12.02.2024		Total Hours	No of hours absent	Attendance
			Session	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	30		%
1	920422214001	22UBT014	ABINANTHAN K	3	3	3	3	3	3	3	3	3	3	30	0	100
2	920422214002	22UBT038	AKSHAYA B R	3	3	3	3	3	3	3	3	3	3	30	0	100
3	920422214003	22UBT002	BALAJI R	3	3	3	3	3	3	3	3	3	3	30	0	100
4	920422214004	22UBT025	DEVI M	3	3	3	3	3	3	3	3	3	3	30	0	100
5	920422214005	22UBT026	N GENGESWARI	3	3	3	3	3	3	3	3	3	3	30	0	100
6	920422214006	22UBT023	GOWRI S	3	3	3	3	3	3	3	3	3	3	30	0	100
7	920422214007	22UBT037	GURUVARSHINI K	3	3	3	3	0	0	3	3	3	3	24	6	80
8	920422214008	22UBT033	HARESH V N	3	3	3	3	3	3	3	3	3	3	30	0	100
9	920422214009	22UBT004	M HELEN GRACELIN JOY	3	3	3	3	3	3	3	3	3	3	30	0	100
10	920422214010	22UBT006	JANAKAR S S	3	3	3	3	3	3	0	0	3	3	24	6	80
11	920422214011	22UBT035	JEYAPRINCY S	3	3	3	3	3	3	3	3	3	3	30	0	100
12	920422214012	22UBT042	KEERTHANA N	3	3	3	3	3	3	3	3	3	3	30	0	100
13	920422214013	22UBT001	LOKESHRAM C	3	3	3	3	3	3	3	3	3	3	30	0	100
14	920422214014	22UBT036	MANOJ HARISH B	3	3	3	3	3	3	3	3	3	3	30	0	100
15	920422214015	22UBT024	MOHAMED AASIM	3	3	3	3	3	3	3	3	3	3	30	0	100
16	920422214016	22UBT022	NAGESWARAN V	3	3	3	3	3	3	3	3	3	3	30	0	100
17	920422214017	22UBT007	NAMBEESWARI J	3	3	3	3	3	3	3	3	3	3	30	0	100
18	920422214018	22UBT040	NANCY G	3	3	3	3	3	3	3	3	3	3	30	0	100
19	920422214019	22UBT008	NAVEEN B J	3	3	3	3	3	3	3	3	3	3	30	0	100
20	920422214020	22UBT011	PARKAVI NANTHINI S	3	3	3	3	3	3	3	3	3	3	30	0	100
21	920422214021	22UBT010	PEBINA A	3	3	3	3	3	3	3	3	3	3	30	0	100
22	920422214022	22UBT039	PRAKITHA S	3	3	3	3	3	3	3	3	3	3	30	0	100
23	920422214023	22UBT009	PRIYADHARSHINI L	3	3	3	3	3	3	3	3	3	3	30	0	100
24	920422214024	22UBT027	PUGAZHENTHI R	3	3	3	3	3	3	3	3	3	3	30	0	100
25	920422214025	22UBT015	RAGUL K	3	3	3	3	3	3	3	3	3	3	30	0	100
26	920422214026	22UBT012	SAKTHI SHIVANI K	3	3	3	3	3	3	3	3	3	3	30	0	100
27	920422214027	22UBT005	SAKTHI SHYAMALA M S	3	3	3	3	3	3	0	0	3	3	24	6	80
28	920422214028	22UBT034	SANKARAPANDIAN P	3	3	3	3	3	3	3	3	3	3	30	0	100
29	920422214029	22UBT018	SARON MERLINE	3	3	3	3	3	3	3	3	3	3	30	0	100
30	920422214030	22UBT030	SELVA MURUGAN G	3	3	3	3	3	3	3	3	3	3	30	0	100

KAMARAJ

DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added Programme

On

ALGAL TECHNOLOGY AND APPLICATIONS

05/02/2024 to 08/02/2024 & 12/02/2024

Attendance

S.No.	REG NO	ROLL NO	Student Name	05.02.2024		06.02.2024		07.02.2024		08.02.2024		12.02.2024		Total Hours	No of hours	Attendance
31	920422214031	22UBT013	SELVA RUBAN M	3	3	3	3	3	3	3	3	3	3	30	0	100
32	920422214032	22UBT029	SHARMILA R	3	3	3	3	3	3	3	3	3	3	30	0	100
33	920422214033	22UBT003	SHIBI JAMES RAJA R	3	3	3	3	3	3	3	3	0	0	24	6	80
34	920422214034	22UBT017	SHUNMUGHI K V	3	3	3	3	3	3	3	3	3	3	30	0	100
35	920422214035	22UBT028	SUMATHI S	3	3	3	3	3	3	3	3	3	3	30	0	100
36	920422214036	22UBT041	SURUTHI N	3	3	3	3	3	3	3	3	3	3	30	0	100
37	920422214037	22UBT031	SWETHA S	3	3	3	3	3	3	3	3	3	3	30	0	100
38	920422214038	22UBT032	J VAISHNAVI RISHIKAA	3	3	3	3	3	3	3	3	3	3	30	0	100
39	920422214039	22UBT020	S VARSHINI	3	3	3	3	3	3	3	3	3	3	30	0	100
40	920422214040	22UBT016	V K VIBHU PURUSHOTH	3	3	3	3	3	3	3	3	3	3	30	0	100
41	920422214041	22UBT021	VISHNUVARDHAN RM	3	3	3	3	3	3	3	3	3	3	30	0	100

Programme Coordinators
Dr S.Karthikumar
Dr K.Geetha
Dr R.Shyam Kumar

HoD/BT
Dr R.Shyam Kumar

Review: VAP- ALGAL TECHNOLOGY AND APPLICATIONS: EXTERNAL ASSESSMENT TEST 2023-24

Respondent

18 BALAJI.R

20:06 Time to complete

21/25 Points

1. Name *

Score / 0 pts

Balaji R

2. Roll No *

Score / 0 pts

22UBT002

3. Register No *

Score / 0 pts

920422214003

4. Class *

Score / 0 pts

II BT

5. Date *

Score / 0 pts

2/19/2024

25 x 1 = 25 Marks

Answer all questions

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

6. 1. Spot the green marine algae *

- (●) a) Sargassam sp
- ( ) b) Gracillaria sp
- ( ) c) Turbeneria sp
- ( ) d) Ulva sp ✓

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

7. 2. Extraction temperature of agar agar ____ °C *

- (●) a) 100 – 110 ✓
- ( ) b) 60-70
- ( ) c) 70-80
- ( ) d) 130-140

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

8. 3. 1) Separation of agar from bounded water after freezing is done by *

- ( ) a) Filteration
- (●) b) Freeze thawing ✓
- ( ) c) Gravity separation
- ( ) d) Acid precipitation

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

9. 4. Central nodal institute working on algal research *

- ( ) a) CMFRI
- ( ) b) CFTRI
- (●) c) CSMCRI ✓
- ( ) d) CECRI

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

10. 5. Model agar and carrageenan extraction unit at Mandapam, Tamil Nadu was governed under *

- a) State agriculture department
- b) State fisheries department ✓
- c) State coastal department
- d) State gulf of mannar development department

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

11. 6. Carrageenan was extracted from *

- a) Ulva sp
- b) Kappaphycus sp ✓
- c) Gelicium sp
- d) Sargassam sp

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

12. 7. Spot the cultivable red algae *

- A) Sargassam sp
- B) Gelidium sp
- C) Kappaphycus sp ✓
- D) Ulva sp

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

13. 8. Kappaphycus seaweed is also termed us _____ , based on its patent. *

- a) Pepsi seaweed ✓
- b) Aquaagri seaweed
- c) Grand seaweed
- d) Itc seaweed

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

14. 9. Alginate recovery from brown algae extracted solution is done by *

- a) Alkali precipitation
- b) Acid precipitation ✓
- c) Centrifugal force
- d) Freeze thawing

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

15. 10. E406 was assigned to *

- a) Sodium alginate
- b) Agar agar ✓
- c) Caragennan
- d) Alginic acid

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

16. 11. Alginate, agar agar, carrageenan were grouped by FSSAI under *

- a) Preservative
- b) Colorant
- c) Emulsifier ✓
- d) Acidifier

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

17. 12. Product to be sold among Islamic people should hold *

- a) Kosher certificate
- b) ISO certificate
- c) Fssai certificate
- d) Halal certificate ✓

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

18. 13. Jews prefer _____ certified products *

- (●) a) Kosher ✓
- ( ) b) BRC
- ( ) c) Halal
- ( ) d) Iso

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

19. 14. Alginates are extracted from *

- (●) a) Brown seaweed ✓
- ( ) b) Red seaweed
- ( ) c) Green seaweed
- ( ) d) Micro algae

✗ Incorrect 0/1 Points

0 / 1 pt
Auto-graded

20. 15. Cough syrup suspension consist of _____ as an emulsifier *

- (●) a) Sodium alginate
- ( ) b) Magnesium alginate
- ( ) c) Agar agar
- ( ) d) Alginic acid ✓

✗ Incorrect 0/1 Points

0 / 1 pt
Auto-graded

21. 16 _____ is used for teeth mold making *

- ( ) a) Sodium alginate
- ( ) b) Magnesium alginate ✓
- ( ) c) Potassium alginate
- (●) d) Calcium alginate

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

22. 17. Alkali used in alginate extraction is *

- a) Sodium carbonate ✓
- b) Sodium bicarbonate
- c) Sodium hydroxide
- d) Sodium sulphate

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

23. 18. Agar is extracted from *

- a) Red algae ✓
- b) Green algae
- c) Brown algae
- d) Sea grass

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

24. 19. On raft cultivation distance between two seedling rope should be _____ *

- a) 6 inches ✓
- b) 12 inches
- c) 3inches
- d) 24 inches

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

25. 20. Cultivation period of Kappaphycus sp on raft will last for ____ days *

- a) 55
- b) 45 ✓
- c) 65
- d) 35

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

26. 21. Carrageenan is widely used in _____ *

- a) Cosmetics
- b) Ice cream ✓
- c) Yoghurt
- d) lipsticks

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

27. 22. Agar food grade material should posses the following mandate certificate to be sold in India *

- a) ISO
- b) FSSAI ✓
- c) Halal
- d) GMP

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

28. 23. Green seaweeds are rich in *

- a) Carbohydrate
- b) Protein ✓
- c) Lipids
- d) Vitamins

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

29. 24. Blue green algae is also termed as *

- a) Hematococcus
- b) Spirulina ✓
- c) Azolla
- d) Ulva

✕ Incorrect 0/1 Points

0 / 1 pt
Auto-graded

30. 25. Commercial grades of agar is diversified on the base of *

- a) Color
- b) Gel strength ✓
- c) Flavor
- d) Bleaching percentage

Dr K. Karthika Dr S. Karthikeyan Dr R. Shyam Kumar

Review: VAP- ALGAL TECHNOLOGY AND APPLICATIONS: EXTERNAL ASSESSMENT TEST 2023-24

Respondent:

13 NANCY.G

22:08
Time to complete

20/25
Points

1. Name *

Score / 0 pts

Nancy G

2. Roll No *

Score / 0 pts

22UBT040

3. Register No *

Score / 0 pts

920422214018

4. Class *

Score / 0 pts

II BT

5. Date *

Score / 0 pts

2/19/2024

25 x 1 = 25 Marks

Answer all questions

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

6. 1. Spot the green marine algae *

- a) Sargassam sp
- b) Gracillaria sp
- c) Turbeneria sp
- d) Ulva sp ✓

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

7. 2. Extraction temperature of agar agar ____ °C *

- a) 100 – 110 ✓
- b) 60-70
- c) 70-80
- d) 130-140

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

8. 3. 1) Separation of agar from bounded water after freezing is done by *

- a) Filteration
- b) Freeze thawing ✓
- c) Gravity separation
- d) Acid precipitation

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

9. 4. Central nodal institute working on algal research *

- a) CMFRI
- b) CFTRI
- c) CSMCRI ✓
- d) CECRI

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

10. 5. Model agar and carrageenan extraction unit at Mandapam, Tamil Nadu was governed under *

- a) State agriculture department
- b) State fisheries department ✓
- c) State coastal department
- d) State gulf of mannar development department

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

11. 6. Carrageenan was extracted from *

- a) Ulva sp
- b) Kappaphycus sp ✓
- c) Gelidium sp
- d) Sargassam sp

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

12. 7. Spot the cultivable red algae *

- A) Sargassam sp
- B) Gelidium sp
- C) Kappaphycus sp ✓
- D) Ulva sp

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

13. 8. Kappaphycus seaweed is also termed us _____ , based on its patent. *

- a) Pepsi seaweed ✓
- b) Aquaagri seaweed
- c) Grand seaweed
- d) Ice seaweed

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

14. 9. Alginate recovery from brown algae extracted solution is done by *

- a) Alkali precipitation
- b) Acid precipitation ✓
- c) Centrifugal force
- d) Freeze thawing

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

15. 10. E406 was assigned to *

- a) Sodium alginate
- b) Agar agar ✓
- c) Caragennan
- d) Alginic acid

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

16. 11. Alginate, agar agar, carrageenan were grouped by FSSAI under *

- a) Preservative
- b) Colorant
- c) Emulsifier ✓
- d) Acidifier

✓ Correct 1/1 Points 1 / 1 pt
Auto-graded

17. 12. Product to be sold among Islamic people should hold *

- a) Kosher certificate
- b) ISO certificate
- c) Fssai certificate
- d) Halal certificate ✓

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

18. 13. Jews prefer _____ certified products *

- (●) a) Kosher ✓
- ( ) b) BRC
- ( ) c) Halal
- ( ) d) Iso

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

19. 14. Alginates are extracted from *

- (●) a) Brown seaweed ✓
- ( ) b) Red seaweed
- ( ) c) Green seaweed
- ( ) d) Micro algae

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

20. 15. Cough syrup suspension consist of _____ as an emulsifier *

- (●) a) Sodium alginate
- ( ) b) Magnesium alginate
- ( ) c) Agar agar
- ( ) d) Alginic acid ✓

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

21. 16. _____ is used for teeth mold making *

- (●) a) Sodium alginate
- ( ) b) Magnesium alginate ✓
- ( ) c) Potassium alginate
- ( ) d) Calcium alginate

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

22. 17. Alkali used in alginate extraction is *

- (●) a) Sodium carbonate ✓
- ( ) b) Sodium bicarbonate
- ( ) c) Sodium hydroxide
- ( ) d) Sodium sulphate

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

23. 18. Agar is extracted from *

- (●) a) Red algae ✓
- ( ) b) Green algae
- ( ) c) Brown algae
- ( ) d) Sea grass

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

24. 19. On raft cultivation distance between two seedling rope should be _____ *

- ( ) a) 6 inches ✓
- (●) b) 12 inches
- ( ) c) 3inches
- ( ) d) 24 inches

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

25. 20. Cultivation period of Kappaphycus sp on raft will last for _____ days *

- ( ) a) 55
- (●) b) 45 ✓
- ( ) c) 65
- ( ) d) 35

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

26. 21. Carrageenan is widely used in _____ *

- a) Cosmetics
- b) Ice cream ✓
- c) Yoghurt
- d) lipsticks

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

27. 22. Agar food grade material should posses the following mandate certificate to be sold in India *

- a) ISO
- b) FSSAI ✓
- c) Halal
- d) GMP

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

28. 23. Green seaweeds are rich in *

- a) Carbohydrate
- b) Protein
- c) Lipids
- d) Vitamins

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

29. 24. Blue green algae is also termed us *

- a) Hematococcus
- b) Spirulina ✓
- c) Azolla
- d) Ulva

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

30. 25. Commercial grades of agar is diversified on the base of *

- a) Color
- b) Gel strength ✓
- c) Flavor
- d) Bleaching percentage

Dr K. Gutha Dr S. Karthikumar Dr R Shyam Kumar

Review: VAP- ALGAL TECHNOLOGY AND APPLICATIONS: EXTERNAL ASSESSMENT TEST 2023-24

Respondent

33 SELVA MURUGAN.G

25:41 Time to complete

19/25 Points

1. Name * Score / 0 pts

SELVA MURUGAN G

2. Roll No * Score / 0 pts

22UBT030

3. Register No * Score / 0 pts

920422214030

4. Class * Score / 0 pts

2nd year Biotechnology

5. Date * Score / 0 pts

2/19/2024

25 x 1 = 25 Marks

Answer all questions

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

6. 1. Spot the green marine algae *

- a) Sargassam sp
- b) Gracillaria sp
- c) Turbeneria sp
- d) Ulva sp ✓

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

7. 2. Extraction temperature of agar agar ____ °C *

- a) 100 – 110 ✓
- b) 60-70
- c) 70-80
- d) 130-140

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

8. 3. 1) Separation of agar from bounded water after freezing is done by *

- a) Filteration
- b) Freeze thawing ✓
- c) Gravity separation
- d) Acid precipitation

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

9. 4. Central nodal institute working on algal research *

- a) CMFRI
- b) CFTRI
- c) CSMCRI ✓
- d) CECRI

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

10. 5. Model agar and carrageenan extraction unit at Mandapam, Tamil Nadu was governed under *

- a) State agriculture department
- b) State fisheries department ✓
- c) State coastal department
- d) State gulf of mannar development department

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

11. 6. Carrageenan was extracted from *

- a) Ulva sp
- b) Kappaphycus sp ✓
- c) Gelidium sp
- d) Sargassam sp

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

12. 7. Spot the cultivable red algae *

- A) Sargassam sp
- B) Gelidium sp
- C) Kappaphycus sp ✓
- D) Ulva sp

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

13. 8. Kappaphycus seaweed is also termed us _____, based on its patent. *

- a) Pepsi seaweed ✓
- b) Aquaagri seaweed
- c) Grand seaweed
- d) Itc seaweed

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

14. 9. Alginate recovery from brown algae extracted solution is done by *

- a) Alkali precipitation
- b) Acid precipitation ✓
- c) Centrifugal force
- d) Freeze thawing

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

15. 10. E406 was assigned to *

- a) Sodium alginate
- b) Agar agar ✓
- c) Caragennan
- d) Alginic acid

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

16. 11. Alginate, agar agar, carrageenan were grouped by FSSAI under *

- a) Preservative
- b) Colorant
- c) Emulsifier ✓
- d) Acidifier

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

17. 12. Product to be sold among Islamic people should hold *

- a) Kosher certificate
- b) ISO certificate
- c) Fssai certificate
- d) Halal certificate ✓

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

18. 13. Jews prefer _____ certified products *

- a) Kosher ✓
- b) BRC
- c) Halal
- d) Iso

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

19. 14. Alginates are extracted from *

- a) Brown seaweed ✓
- b) Red seaweed
- c) Green seaweed
- d) Micro algae

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

20. 15. Cough syrup suspension consist of _____ as an emulsifier *

- a) Sodium alginate
- b) Magnesium alginate
- c) Agar agar
- d) Alginic acid ✓

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

21. 16. _____ is used for teeth mold making *

- a) Sodium alginate
- b) Magnesium alginate ✓
- c) Potassium alginate
- d) Calcium alginate

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

22. 17. Alkali used in alginate extraction is *

- a) Sodium carbonate ✓
- b) Sodium bicarbonate
- c) Sodium hydroxide
- d) Sodium sulphate

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

23. 18. Agar is extracted from *

- a) Red algae ✓
- b) Green algae
- c) Brown algae
- d) Sea grass

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

24. 19. On raft cultivation distance between two seedling rope should be _____ *

- a) 6 inches ✓
- b) 12 inches
- c) 3inches
- d) 24 inches

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

25. 20. Cultivation period of Kappaphycus sp on raft will last for _____ days *

- a) 55
- b) 45 ✓
- c) 65
- d) 35

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

26. 21. Carrageenan is widely used in _____ *

- a) Cosmetics
- b) Ice cream ✓
- c) Yoghurt
- d) lipsticks

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

27. 22. Agar food grade material should posses the following mandate certificate to be sold in India *

- a) ISO
- b) FSSAI ✓
- c) Halal
- d) GMP

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

28. 23. Green seaweeds are rich in *

- a) Carbohydrate
- b) Protein ✓
- c) Lipids
- d) Vitamins

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

29. 24. Blue green algae is also termed us *

- a) Hematococcus
- b) Spirulina ✓
- c) Azolla
- d) Ulva

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

30. 25 Commercial grades of agar is diversified on the base of *

- a) Color
- b) Gel strength ✓
- c) Flavor
- d) Bleaching percentage

Dr K. Kavitha Dr S. Karthikumar Dr R. Shyam Kumar

Review: VAP- ALGAL TECHNOLOGY AND APPLICATIONS: EXTERNAL ASSESSMENT TEST 2023-24

Respondent			
19	PRIYADHARSHINI.L	13:15 Time to complete	20/25 Points

1. Name *

Score / 0 pts

L.Priyadharshini

2. Roll No *

Score / 0 pts

22UBT009

3. Register No *

Score / 0 pts

920422214023

4. Class *

Score / 0 pts

II-BT

5. Date *

Score / 0 pts

2/19/2024

25 x 1 = 25 Marks

Answer all questions

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

6. 1. Spot the green marine algae *

- a) Sargassam sp
- b) Gracillaria sp
- c) Turbeneria sp
- d) Ulva sp ✓

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

7. 2. Extraction temperature of agar agar ____ °C *

- a) 100 – 110 ✓
- b) 60-70
- c) 70-80
- d) 130-140

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

8. 3. 1) Separation of agar from bounded water after freezing is done by *

- a) Filteration
- b) Freeze thawing ✓
- c) Gravity separation
- d) Acid precipitation

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

9. 4. Central nodal institute working on algal research *

- a) CMFRI
- b) CFTRI
- c) CSMCRI ✓
- d) CECRI

✓ **Correct** 1/1 Points 1 / 1 pt
Auto-graded

10. 5. Model agar and carrageenan extraction unit at Mandapam, Tamil Nadu was governed under *

- a) State agriculture department
- b) State fisheries department ✓
- c) State coastal department
- d) State gulf of mannar development department

✓ **Correct** 1/1 Points 1 / 1 pt
Auto-graded

11. 6. Carrageenan was extracted from *

- a) Ulva sp
- b) Kappaphycus sp ✓
- c) Gelidium sp
- d) Sargassam sp

✓ **Correct** 1/1 Points 1 / 1 pt
Auto-graded

12. 7. Spot the cultivable red algae *

- A) Sargassam sp
- B) Gelidium sp
- C) Kappaphycus sp ✓
- D) Ulva sp

✓ **Correct** 1/1 Points 1 / 1 pt
Auto-graded

13. 8. Kappaphycus seaweed is also termed us _____ , based on its patent. *

- a) Pepsi seaweed ✓
- b) Aquaagri seaweed
- c) Grand seaweed
- d) Itc seaweed

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

14. 9. Alginate recovery from brown algae extracted solution is done by *

- a) Alkali precipitation
- b) Acid precipitation ✓
- c) Centrifugal force
- d) Freeze thawing

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

15. 10. E406 was assigned to *

- a) Sodium alginate
- b) Agar agar ✓
- c) Caragennan
- d) Alginic acid

✗ Incorrect 0/1 Points

0 / 1 pt
Auto-graded

16. 11. Alginate, agar agar, carrageenan were grouped by FSSAI under *

- a) Preservative
- b) Colorant
- c) Emulsifier ✓
- d) Acidifier

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

17. 12. Product to be sold among Islamic people should hold *

- a) Kosher certificate
- b) ISO certificate
- c) Fssai certificate
- d) Halal certificate ✓

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

18. 13. Jews prefer _____ certified products *

- (●) a) Kosher ✓
- ( ) b) BRC
- ( ) c) Halal
- ( ) d) Iso

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

19. 14. Alginates are extracted from *

- (●) a) Brown seaweed ✓
- ( ) b) Red seaweed
- ( ) c) Green seaweed
- ( ) d) Micro algae

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

20. 15. Cough syrup suspension consist of _____ as an emulsifier *

- (●) a) Sodium alginate
- ( ) b) Magnesium alginate
- ( ) c) Agar agar
- ( ) d) Alginic acid ✓

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

21. 16. _____ is used for teeth mold making *

- (●) a) Sodium alginate
- ( ) b) Magnesium alginate ✓
- ( ) c) Potassium alginate
- ( ) d) Calcium alginate

✓ Correct 1/1 Points

22. 17. Alkali used in alginate extraction is * 1 / 1 pt Auto-graded

- a) Sodium carbonate ✓
- b) Sodium bicarbonate
- c) Sodium hydroxide
- d) Sodium sulphate

✓ Correct 1/1 Points

23. 18. Agar is extracted from * 1 / 1 pt Auto-graded

- a) Red algae ✓
- b) Green algae
- c) Brown algae
- d) Sea grass

✓ Correct 1/1 Points

24. 19. On raft cultivation distance between two seedling rope should be _____ * 1 / 1 pt Auto-graded

- a) 6 inches ✓
- b) 12 inches
- c) 3inches
- d) 24 inches

✓ Correct 1/1 Points

25. 20. Cultivation period of Kappaphycus sp on raft will last for _____ days * 1 / 1 pt Auto-graded

- a) 55
- b) 45 ✓
- c) 65
- d) 35

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

26. 21. Carrageenan is widely used in _____ *

- a) Cosmetics
- b) Ice cream ✓
- c) Yoghurt
- d) lipsticks

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

27. 22. Agar food grade material should posses the following mandate certificate to be sold in India *

- a) ISO
- b) FSSAI ✓
- c) Halal
- d) GMP

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

28. 23. Green seaweeds are rich in *

- a) Carbohydrate
- b) Protein ✓
- c) Lipids
- d) Vitamins

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1 / 1 pt
Auto-graded

29. 24. Blue green algae is also termed us *

- a) Hematococcus
- b) Spirulina ✓
- c) Azolla
- d) Ulva

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1 / 1 pt
Auto-graded

30. 25. Commercial grades of agar is diversified on the base of *

- a) Color
- b) Gel strength ✓
- c) Flavor
- d) Bleaching percentage

Dr K. Gautha Dr S. Karthi kumar Dr. R. Shyam Kuma

Review: VAP- ALGAL TECHNOLOGY AND APPLICATIONS: EXTERNAL ASSESSMENT TEST 2023-24

Respondent

25 PARKAVI NANTHINI.S

25:25
Time to complete

20/25
Points

1. Name * Score / 0 pts

Parkavi Nanthini.S

2. Roll No * Score / 0 pts

22ubt011

3. Register No * Score / 0 pts

920422214020

4. Class * Score / 0 pts

II BT

5. Date * Score / 0 pts

2/19/2024

25 x 1 = 25 Marks

Answer all questions

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

6. 1. Spot the green marine algae *

- ○ a) Sargassam sp
- ○ b) Gracillaria sp
- ○ c) Turbeneria sp
- ◉ d) Ulva sp ✓

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1 / 1 pt
Auto-graded

7. 2. Extraction temperature of agar agar ____ °C *

- ◉ a) 100 – 110 ✓
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1 / 1 pt
Auto-graded

8. 3. 1) Separation of agar from bounded water after freezing is done by *

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- ○ d) Acid precipitation

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1 / 1 pt
Auto-graded

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- ○ a) CMFRI
- ○ b) CFTRI
- ◉ c) CSMCRI ✓
- ○ d) CECRI

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

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- b) State fisheries department ✓
- c) State coastal department
- d) State gulf of mannar development department

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

11. 6. Carrageenan was extracted from *

- a) Ulva sp
- b) Kappaphycus sp ✓
- c) Gelidium sp
- d) Sargassam sp

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

12. 7. Spot the cultivable red algae *

- A) Sargassam sp
- B) Gelidium sp
- C) Kappaphycus sp ✓
- D) Ulva sp

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

13. 8. Kappaphycus seaweed is also termed us _____ , based on its patent. *

- a) Pepsi seaweed ✓
- b) Aquaagri seaweed
- c) Grand seaweed
- d) Itc seaweed

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

14. 9. Alginate recovery from brown algae extracted solution is done by *

- a) Alkali precipitation
- b) Acid precipitation ✓
- c) Centrifugal force
- d) Freeze thawing

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

15. 10. E406 was assigned to *

- a) Sodium alginate
- b) Agar agar ✓
- c) Caragennan
- d) Alginic acid

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

16. 11. Alginate, agar agar, carrageenan were grouped by FSSAI under *

- a) Preservative
- b) Colorant
- c) Emulsifier ✓
- d) Acidifier

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

17. 12. Product to be sold among Islamic people should hold *

- a) Kosher certificate
- b) ISO certificate
- c) Fssai certificate
- d) Halal certificate ✓

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

18. 13. Jews prefer _____ certified products *

- [x] a) Kosher ✓
- [ ] b) BRC
- [ ] c) Halal
- [ ] d) Iso

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

19. 14. Alginates are extracted from *

- [x] a) Brown seaweed ✓
- [ ] b) Red seaweed
- [ ] c) Green seaweed
- [ ] d) Micro algae

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

20. 15. Cough syrup suspension consist of _____ as an emulsifier *

- [ ] a) Sodium alginate
- [ ] b) Magnesium alginate
- [ ] c) Agar agar
- [x] d) Alginic acid ✓

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

21. 16. _____ is used for teeth mold making *

- [x] a) Sodium alginate
- [ ] b) Magnesium alginate ✓
- [ ] c) Potassium alginate
- [ ] d) Calcium alginate

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

22. 17. Alkali used in alginate extraction is *

- a) Sodium carbonate ✓
- b) Sodium bicarbonate
- c) Sodium hydroxide
- d) Sodium sulphate

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

23. 18. Agar is extracted from *

- a) Red algae ✓
- b) Green algae
- c) Brown algae
- d) Sea grass

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

24. 19. On raft cultivation distance between two seedling rope should be _____ *

- a) 6 inches ✓
- b) 12 inches
- c) 3inches
- d) 24 inches

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

25. 20. Cultivation period of Kappaphycus sp on raft will last for _____ days *

- a) 55
- b) 45 ✓
- c) 65
- d) 35

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

26. 21. Carrageenan is widely used in _____ *

- a) Cosmetics
- b) Ice cream ✓
- c) Yoghurt
- d) lipsticks

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

27. 22. Agar food grade material should posses the following mandate certificate to be sold in India *

- a) ISO
- b) FSSAI ✓
- c) Halal
- d) GMP

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

28. 23. Green seaweeds are rich in *

- a) Carbohydrate
- b) Protein ✓
- c) Lipids
- d) Vitamins

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

29. 24. Blue green algae is also termed us *

- a) Hematococcus
- b) Spirulina ✓
- c) Azolla
- d) Ulva

✓ Correct 1/1 Points

1 / 1 pt
Auto-graded

30. 25. Commercial grades of agar is diversified on the base of *

- a) Color
- b) Gel strength ✓
- c) Flavor
- d) Bleaching percentage

Dr K. Geetha Dr S. Karthikumar Dr R. Shyam Kumar

VAP- ALGAL TECHNOLOGY AND APPLICATIONS: EXTERNAL ASSESSMENT TEST 2023-24

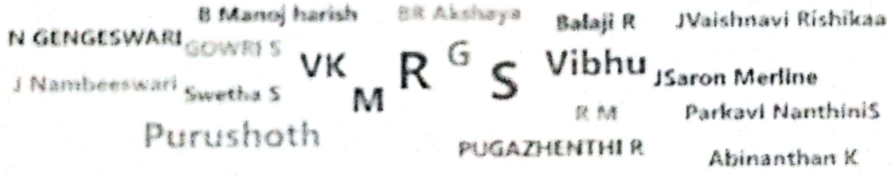
41 Responses | 19.8 Average Score | Active Status

1. Name (0 point)

41
Responses

Latest Responses
"J Nambeeswari"
"Vishnu Vardhan R M"
"R Shibi James Raja"

3 respondents (7%) answered R for this question

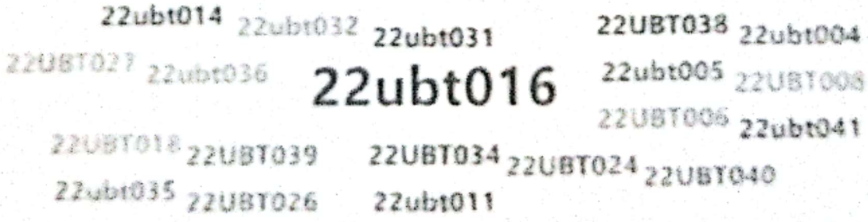


2. Roll No (0 point)

41
Responses

Latest Responses
"22ubt007"
"22ubt021"
"22UBT003"

2 respondents (5%) answered 22ubt016 for this question



3. Register No (0 point)

41
Responses

Latest Responses
"920422214017"
"920422214041"
"920422214033"

1 respondents (2%) answered **920422214035** for this question.

920422214023 920422214034 920422214002 920422214018
920422214029 920422214028 920422214008 920422214006
920422214014 920422214035 920422214022
920422214001 920422214010 920422214027 920422214040
920422214038 920422214015 920422214037 920422214003
920422214009

4. Class (0 point)

41
Responses

Latest Responses
"2nd year BT"
"2 year"
"2nd Year"

15 respondents (37%) answered **2nd year** for this question.

Tech Biotechnology BTech Biotechnology nd biotechnology
II YEAR **2nd year** II BT B1
2nd BT Biotechnology - II
Technology year Biotech year biotechnology year BT 2nd Biotech
year BTech

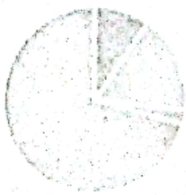
5. Date (0 point)

41
Responses

Latest Responses
"2024-02-19"
"2024-02-19"
"2024-02-19"

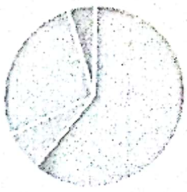
6. 1. Spot the green marine algae (1 point)
71% of respondents (29 of 41) answered this question correctly.

a) Sargassum sp 4
b) Gracilaria sp 7
c) Turbinaria sp 1
d) Ulva sp 29



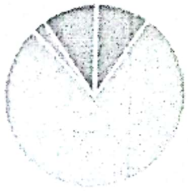
7. 2. Extraction temperature of agar agar ____ °C (1 point)
61% of respondents (25 of 41) answered this question correctly.

a) 100 – 110	25	✓
b) 60-70	3	
c) 70-80	11	
d) 130-140	2	



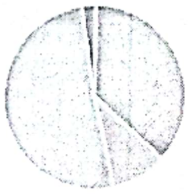
8. 3. 1) Separation of agar from bounded water after freezing is done by (1 point)
78% of respondents (32 of 41) answered this question correctly.

a) Filteration	4	
b) Freeze thawing	32	✓
c) Gravity separation	1	
d) Acid precipitation	4	



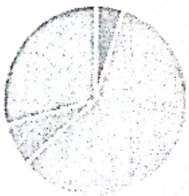
9. 4. Central nodal institute working on algal research (1 point)
51% of respondents (21 of 41) answered this question correctly.

a) CMFRI	15	
b) CFTRI	4	
c) CSMCRI	21	✓
d) CECRI	1	



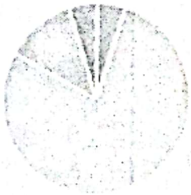
10. 5. Model agar and carrageenan extraction unit at Mandapam, Tamil Nadu was governed under (1 point)
59% of respondents (24 of 41) answered this question correctly.

a) State agriculture department	2	
b) State fisheries department	24	✓
c) State coastal department	3	
d) State gulf of mannar develop...	12	



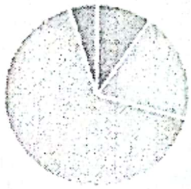
11. 6. Carrageenan was extracted from (1 point)
78% of respondents (32 of 41) answered this question correctly.

a) Ulva sp	2	
b) Kappaphycus sp	32	✓
c) Gelidium sp	5	
d) Sargassum sp	2	



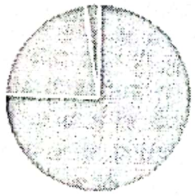
12. 7. Spot the cultivable red algae (1 point)
66% of respondents (27 of 41) answered this question correctly.

A) Sargassam sp	4	
B) Gelidium sp	8	
C) Kappaphycus sp	27	✓
D) Ulva sp	2	



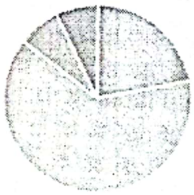
13. 8. Kappaphycus seaweed is also termed us _____, based on its patent. (1 point)
76% of respondents (31 of 41) answered this question correctly.

a) Pepsi seaweed	31	✓
b) Aquaagri seaweed	9	
c) Grand seaweed	1	
d) Itc seaweed	0	



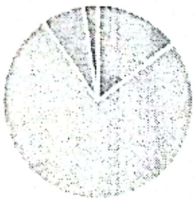
14. 9. Alginate recovery from brown algae extracted solution is done by (1 point)
63% of respondents (26 of 41) answered this question correctly.

a) Alkali precipitation	9	
b) Acid precipitation	26	
c) Centrifugal force	3	
d) Freeze thawing	3	



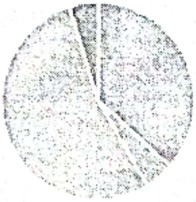
15. 10. E406 was assigned to (1 point)
76% of respondents (31 of 41) answered this question correctly.

a) Sodium alginate	6	
b) Agar agar	31	✓
c) Carageenan	3	
d) Alginic acid	1	



16. 11. Alginate, agar agar, carrageenan were grouped by FSSAI under (1 point)
54% of respondents (22 of 41) answered this question correctly.

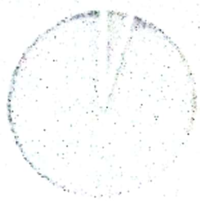
a) Preservative	15	
b) Colorant	2	
c) Emulsifier	22	
d) Acidifier	2	



17. 12. Product to be sold among Islamic people should hold (1 point)

95% of respondents (39 of 41) answered this question correctly.

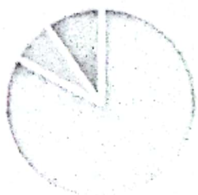
a) Kosher certificate	0
b) ISO certificate	0
c) Fssai certificate	2
d) Halal certificate	39 ✓



18. 13. Jews prefer ________ certified products (1 point)

83% of respondents (34 of 41) answered this question correctly.

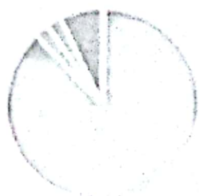
a) Kosher	34 ✓
b) FRC	3
c) Halal	0
d) Iso	4



19. 14. Alginates are extracted from (1 point)

88% of respondents (36 of 41) answered this question correctly.

a) Brown seaweed	36 ✓
b) Red seaweed	1
c) Green seaweed	1
d) Micro algae	3



20. 15. Cough syrup suspension consist of _____ as an emulsifier (1 point)

22% of respondents (9 of 41) answered this question correctly.

a) Sodium alginate	15
b) Magnesium alginate	7
c) Agar agar	10
d) Alginic acid	9 ✓

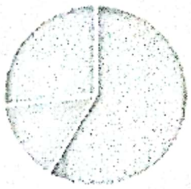
21. 16. ________ is used for teeth mold making (1 point)

10% of respondents (4 of 41) answered this question correctly.

a) Sodium alginate	14
b) Magnesium alginate	4 ✓
c) Potassium alginate	2
d) Calcium alginate	21

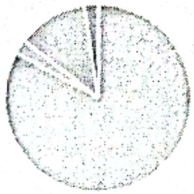
22. 17. Alkali used in alginate extraction is (1 point)
59% of respondents (24 of 41) answered this question correctly.

a) Sodium carbonate	24	✓
b) Sodium bicarbonate	6	
c) Sodium hydroxide	11	
d) Sodium sulphate	0	



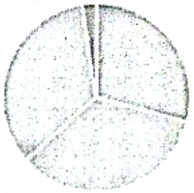
23. 18. Agar is extracted from (1 point)
83% of respondents (34 of 41) answered this question correctly.

a) Red algae	34	✓
b) Green algae	1	
c) Brown algae	5	
d) Sea grass	1	



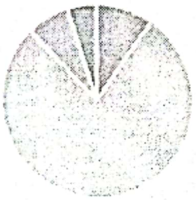
24. 19. On raft cultivation distance between two seedling rope should be _____ (1 point)
29% of respondents (12 of 41) answered this question correctly.

a) 6 inches	12	
b) 12 inches	14	
c) 3inches	14	
d) 24 inches	1	



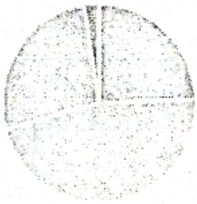
25. 20. Cultivation period of Kappaphycus sp on raft will last for _____ days (1 point)
78% of respondents (32 of 41) answered this question correctly.

a) 55	4	
b) 45	32	✓
c) 65	3	
d) 35	2	



26. 21. Carrageenan is widely used in _____ (1 point)
46% of respondents (19 of 41) answered this question correctly.

a) Cosmetics	10	
b) Ice cream	19	✓
c) Yoghurt	11	
d) lipsticks	1	



27. 22. Agar food grade material should posses the following mandate certificate to be sold in India (1 point)

68% of respondents (28 of 41) answered this question correctly.

a) ISO	11	
b) FSSAI	28	✓
c) Halal	0	
d) GMP	2	

28. 23. Green seaweeds are rich in (1 point)

32% of respondents (13 of 41) answered this question correctly.

a) Carbohydrate	18	
b) Protein	13	✓
c) Lipids	2	
d) Vitamins	8	

29. 24. Blue green algae is also termed us (1 point)

59% of respondents (24 of 41) answered this question correctly.

a) Hematococcus	10	
b) Spirulina	24	✓
c) Azolla	6	
d) Ulva	1	

30. 25. Commercial grades of agar is diversified on the base of (1 point)

71% of respondents (29 of 41) answered this question correctly.

a) Color	5	
b) Gel strength	29	✓
c) Flavor	3	
d) Bleaching percentage	4	

(Dr K. Gupta) (Dr S. Karthikumar) (Dr R. Shyam Kumar)

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S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

Industry Certified Value Added Programme

on

ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

Department: Biotechnology Regulation: R2021

Year: 2023-24 Semester: Even

INTERNAL MARK STATEMENT

S.No.	Reg Number	Roll Number	Student Name	Product Making	PPT Presentation	Product Demonstration	Total Marks
			Marks	**10**	**10**	**20**	**40**
1	920422214001	22UBT014	ABINANTHAN K	10	10	20	**40**
2	920422214002	22UBT038	AKSHAYA B R	10	10	20	**40**
3	920422214003	22UBT002	BALAJI R	10	10	20	**40**
4	920422214004	22UBT025	DEVI M	10	10	20	**40**
5	920422214005	22UBT026	N GENGESWARI	10	10	20	**40**
6	920422214006	22UBT023	GOWRI S	10	10	20	**40**
7	920422214007	22UBT037	GURUVARSHINI K	10	10	20	**40**
8	920422214008	22UBT033	HARESH V N	10	10	20	**40**
9	920422214009	22UBT004	M HELEN GRACELIN JOY	10	10	20	**40**
10	920422214010	22UBT006	JANAKAR S S	10	10	20	**40**
11	920422214011	22UBT035	JEYAPRINCY S	10	10	20	**40**
12	920422214012	22UBT042	KEERTHANA N	10	10	20	**40**
13	920422214013	22UBT001	LOKESHRAM C	10	10	20	**40**
14	920422214014	22UBT036	MANOJ HARISH B	10	10	20	**40**
15	920422214015	22UBT024	MOHAMED AASIM	10	10	20	**40**
16	920422214016	22UBT022	NAGESWARAN V	10	10	20	**40**
17	920422214017	22UBT007	NAMBEESWARI J	10	10	20	**40**
18	920422214018	22UBT040	NANCY G	10	10	20	**40**
19	920422214019	22UBT008	NAVEEN B J	10	10	20	**40**
20	920422214020	22UBT011	PARKAVI NANTHINI S	10	10	20	**40**
21	920422214021	22UBT010	PEBINA A	10	10	20	**40**
22	920422214022	22UBT039	PRAKITHA S	10	10	20	**40**
23	920422214023	22UBT009	PRIYADHARSHINI L	10	10	20	**40**
24	920422214024	22UBT027	PUGAZHENTHI R	10	10	20	**40**
25	920422214025	22UBT015	RAGUL K	10	10	20	**40**
26	920422214026	22UBT012	SAKTHI SHIVANI K	10	10	20	**40**
27	920422214027	22UBT005	SAKTHI SHYAMALA M S	10	10	20	**40**
28	920422214028	22UBT034	SANKARAPANDIAN P	10	10	20	**40**
29	920422214029	22UBT018	SARON MERLINE	10	10	20	**40**
30	920422214030	22UBT030	SELVA MURUGAN G	10	10	20	**40**
31	920422214031	22UBT013	SELVA RUBAN M	10	10	20	**40**

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Industry Certified Value Added Programme

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ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

Department: Biotechnology Regulation: R2021
Year: 2023-24 Semester: Even

INTERNAL MARK STATEMENT

S.No.	Reg Number	Roll Number	Student Name	Product Making	PPT Presentation	Product Demonstration	Total Marks
32	920422214032	22UBT029	SHARMILA R	10	10	20	**40**
33	920422214033	22UBT003	SHIBI JAMES RAJA R	10	10	20	**40**
34	920422214034	22UBT017	SHUNMUGHI K V	10	10	20	**40**
35	920422214035	22UBT028	SUMATHI S	10	10	20	**40**
36	920422214036	22UBT041	SURUTHI N	10	10	20	**40**
37	920422214037	22UBT031	SWETHA S	10	10	20	**40**
38	920422214038	22UBT032	J VAISHNAVI RISHIKAA	10	10	20	**40**
39	920422214039	22UBT020	S VARSHINI	10	10	20	**40**
40	920422214040	22UBT016	V K VIBHU PURUSHOTH	10	10	20	**40**
41	920422214041	22UBT021	VISHNUVARDHAN RM	10	10	20	**40**

Dr S.Karthikumar
Judge 1

Dr R.Shyam Kumar
Judge 2

HoD/BT
Dr R.Shyam Kumar

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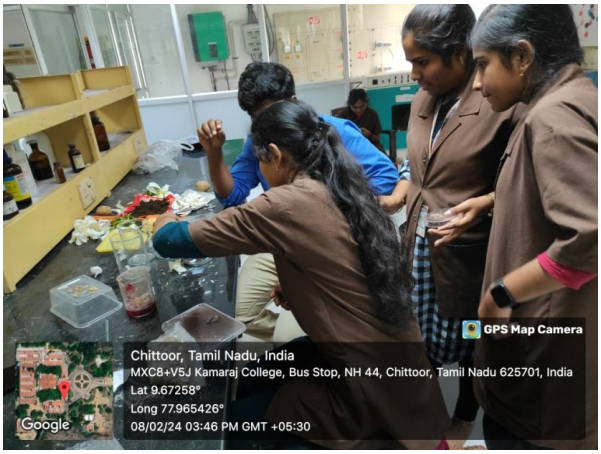
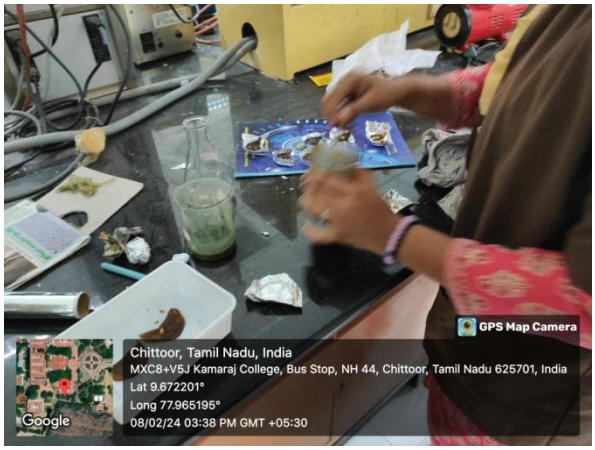
DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added Programme
On
ALGAL TECHNOLOGY AND APPLICATIONS
5th to 8th and 12th February 2024

PROJECT PHOTOS

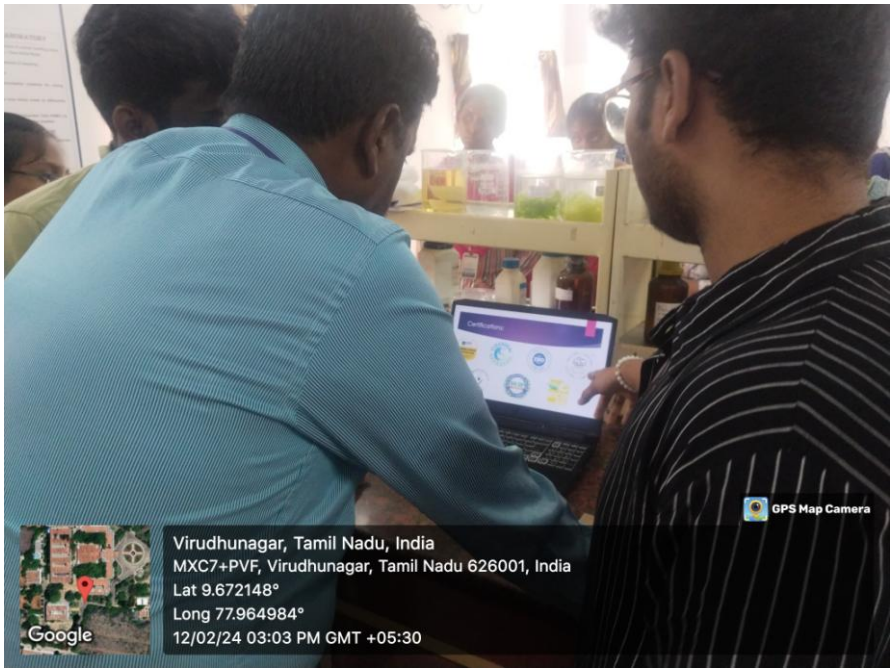
Stage 1: Product Making





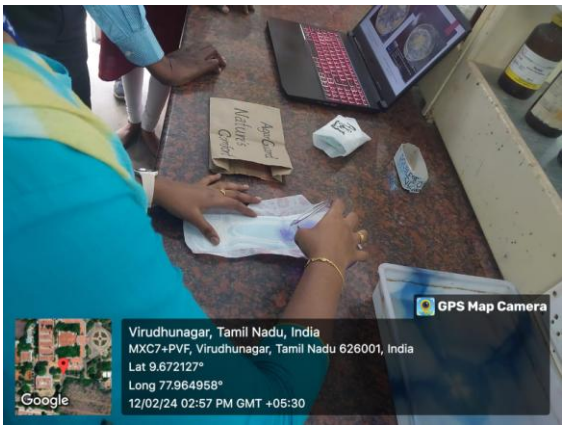
Preparation of Algal based Products

Stage 2: PPT presentation of Product Idea



Presentation of PPT to judges

Stage 3: Product demonstration



Programme Coordinators
Dr S.Karthikumar
Dr K.Geetha
Dr R.Shyam Kumar

HoD/BT
Dr R.Shyam Kumar

KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

S.P.G.Chidambara Nadar - C.Nagammal Campus

S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

Industry Certified Value Added Programme

on

ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

Department: Biotechnology Regulation: R2021

Year: 2023-24 Semester: Even

EXTERNAL EVALUATION MARK STATEMENT

S.No.	Reg Number	Roll Number	Student Name	External Marks		%
			Marks	25	60	100
1	920422214001	22UBT014	ABINANTHAN K	21	50	**84**
2	920422214002	22UBT038	AKSHAYA B R	21	50	**84**
3	920422214003	22UBT002	BALAJI R	21	50	**84**
4	920422214004	22UBT025	DEVI M	21	50	**84**
5	920422214005	22UBT026	N GENGESWARI	19	46	**76**
6	920422214006	22UBT023	GOWRI S	20	48	**80**
7	920422214007	22UBT037	GURUVARSHINI K	21	50	**84**
8	920422214008	22UBT033	HARESH V N	21	50	**84**
9	920422214009	22UBT004	M HELEN GRACELIN JOY	19	46	**76**
10	920422214010	22UBT006	JANAKAR S S	19	46	**76**
11	920422214011	22UBT035	JEYAPRINCY S	20	48	**80**
12	920422214012	22UBT042	KEERTHANA N	21	50	**84**
13	920422214013	22UBT001	LOKESHRAM C	19	46	**76**
14	920422214014	22UBT036	MANOJ HARISH B	21	50	**84**
15	920422214015	22UBT024	MOHAMED AASIM	20	48	**80**
16	920422214016	22UBT022	NAGESWARAN V	19	46	**76**
17	920422214017	22UBT007	NAMBEESWARI J	20	48	**80**
18	920422214018	22UBT040	NANCY G	20	48	**80**
19	920422214019	22UBT008	NAVEEN B J	19	46	**76**
20	920422214020	22UBT011	PARKAVI NANTHINI S	20	48	**80**
21	920422214021	22UBT010	PEBINA A	19	46	**76**
22	920422214022	22UBT039	PRAKITHA S	19	46	**76**
23	920422214023	22UBT009	PRIYADHARSHINI L	20	48	**80**
24	920422214024	22UBT027	PUGAZHENTHI R	19	46	**76**
25	920422214025	22UBT015	RAGUL K	21	50	**84**
26	920422214026	22UBT012	SAKTHI SHIVANI K	20	48	**80**
27	920422214027	22UBT005	SAKTHI SHYAMALA M S	20	48	**80**
28	920422214028	22UBT034	SANKARAPANDIAN P	20	48	**80**
29	920422214029	22UBT018	SARON MERLINE	20	48	**80**

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EXTERNAL EVALUATION MARK STATEMENT

S.No.	Reg Number	Roll Number	Student Name	External Marks		%
30	920422214030	22UBT030	SELVA MURUGAN G	19	46	**76**
31	920422214031	22UBT013	SELVA RUBAN M	20	48	**80**
32	920422214032	22UBT029	SHARMILA R	19	46	**76**
33	920422214033	22UBT003	SHIBI JAMES RAJA R	19	46	**76**
34	920422214034	22UBT017	SHUNMUGHI K V	20	48	**80**
35	920422214035	22UBT028	SUMATHI S	19	46	**76**
36	920422214036	22UBT041	SURUTHI N	20	48	**80**
37	920422214037	22UBT031	SWETHA S	19	46	**76**
38	920422214038	22UBT032	J VAISHNAVI RISHIKAA	19	46	**76**
39	920422214039	22UBT020	S VARSHINI	20	48	**80**
40	920422214040	22UBT016	V K VIBHU PURUSHOTH	19	46	**76**
41	920422214041	22UBT021	VISHNUVARDHAN RM	19	46	**76**

VAP Coordinators
Dr S.Karthikumar
Dr K.Geetha
Dr R.Shyam Kumar

HoD/BT
Dr R.Shyam Kumar

AK SEAWEEDS
113/1A Nochioorani Village, Ramanathapuram(Dist) 623 517. TamilNadu, INDIA.
GST No.: 33AAYFA6470G1Z5

Industry Certified Value
Added Programme
On

ALGAL TECHNOLOGY AND APPLICATIONS

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Department: Biotechnology Regulation: R2021

Year: 2023-24 Semester: Even

GRADE SHEET

S.No.	Reg Number	Roll Number	Student Name	Internal Marks-Project	External Marks-Test	Total Marks
			Marks alloted	40	60	100
1	920422214001	22UBT014	ABINANTHAN K	40	50	90
2	920422214002	22UBT038	AKSHAYA B R	40	50	90
3	920422214003	22UBT002	BALAJI R	40	50	90
4	920422214004	22UBT025	DEVI M	40	50	90
5	920422214005	22UBT026	N GENGESWARI	40	46	86
6	920422214006	22UBT023	GOWRI S	40	48	88
7	920422214007	22UBT037	GURUVARSHINI K	40	50	90
8	920422214008	22UBT033	HARESH V N	40	50	90
9	920422214009	22UBT004	M HELEN GRACELIN JOY	40	46	86
10	920422214010	22UBT006	JANAKAR S S	40	46	86
11	920422214011	22UBT035	JEYAPRINCY S	40	48	88
12	920422214012	22UBT042	KEERTHANA N	40	50	90
13	920422214013	22UBT001	LOKESHRAM C	40	46	86
14	920422214014	22UBT036	MANOJ HARISH B	40	50	90
15	920422214015	22UBT024	MOHAMED AASIM	40	48	88
16	920422214016	22UBT022	NAGESWARAN V	40	46	86
17	920422214017	22UBT007	NAMBEESWARI J	40	48	88
18	920422214018	22UBT040	NANCY G	40	48	88

AK SEAWEEDS

113/1A Nochioorani Village, Ramanathapuram(Dist) 623 517. TamilNadu, INDIA.
GST No.: 33AAYFA6470G1Z5

19	920422214019	22UBT008	NAVEEN B J	40	46	86
20	920422214020	22UBT011	PARKAVI NANTHINI S	40	48	88
21	920422214021	22UBT010	PEBINA A	40	46	86
22	920422214022	22UBT039	PRAKITHA S	40	46	86
23	920422214023	22UBT009	PRIYADHARSHINI L	40	48	88
24	920422214024	22UBT027	PUGAZHENTHI R	40	46	86
25	920422214025	22UBT015	RAGUL K	40	50	90
26	920422214026	22UBT012	SAKTHI SHIVANI K	40	48	88
27	920422214027	22UBT005	SAKTHI SHYAMALA M S	40	48	88
28	920422214028	22UBT034	SANKARAPANDIAN P	40	48	88
29	920422214029	22UBT018	SARON MERLINE	40	48	88
30	920422214030	22UBT030	SELVA MURUGAN G	40	46	86
31	920422214031	22UBT013	SELVA RUBAN M	40	48	88
32	920422214032	22UBT029	SHARMILA R	40	46	86
33	920422214033	22UBT003	SHIBI JAMES RAJA R	40	46	86
34	920422214034	22UBT017	SHUNMUGHI K V	40	48	88
35	920422214035	22UBT028	SUMATHI S	40	46	86
36	920422214036	22UBT041	SURUTHI N	40	48	88
37	920422214037	22UBT031	SWETHA S	40	46	86
38	920422214038	22UBT032	J VAISHNAVI RISHIKAA	40	46	86
39	920422214039	22UBT020	S VARSHINI	40	48	88
40	920422214040	22UBT016	V K VIBHU PURUSHOTH	40	46	86
41	920422214041	22UBT021	VISHNUVARDHAN RM	40	46	86

Resource person
(Manager)
Mr R.P.Rajadurai Jesudoss

KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution)

Industry Certified Value Added Programme

On

ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

Department: Biotechnology Regulation: R2021

Year: 2023-24 Semester: Even

GRADE SHEET

S.No.	Reg Number	Roll Number	Student Name	Internal Marks-Project	External Marks-Test	Total Marks	Credit points
			Marks alloted	40	60	100	2
1	920422214001	22UBT014	ABINANTHAN K	40	50	90	2
2	920422214002	22UBT038	AKSHAYA B R	40	50	90	2
3	920422214003	22UBT002	BALAJI R	40	50	90	2
4	920422214004	22UBT025	DEVI M	40	50	90	2
5	920422214005	22UBT026	N GENGESWARI	40	46	86	2
6	920422214006	22UBT023	GOWRI S	40	48	88	2
7	920422214007	22UBT037	GURUVARSHINI K	40	50	90	2
8	920422214008	22UBT033	HARESH V N	40	50	90	2
9	920422214009	22UBT004	M HELEN GRACELIN JOY	40	46	86	2
10	920422214010	22UBT006	JANAKAR S S	40	46	86	2
11	920422214011	22UBT035	JEYAPRINCY S	40	48	88	2
12	920422214012	22UBT042	KEERTHANA N	40	50	90	2
13	920422214013	22UBT001	LOKESHRAM C	40	46	86	2
14	920422214014	22UBT036	MANOJ HARISH B	40	50	90	2
15	920422214015	22UBT024	MOHAMED AASIM	40	48	88	2
16	920422214016	22UBT022	NAGESWARAN V	40	46	86	2
17	920422214017	22UBT007	NAMBEESWARI J	40	48	88	2
18	920422214018	22UBT040	NANCY G	40	48	88	2
19	920422214019	22UBT008	NAVEEN B J	40	46	86	2
20	920422214020	22UBT011	PARKAVI NANTHINI S	40	48	88	2
21	920422214021	22UBT010	PEBINA A	40	46	86	2
22	920422214022	22UBT039	PRAKITHA S	40	46	86	2
23	920422214023	22UBT009	PRIYADHARSHINI L	40	48	88	2
24	920422214024	22UBT027	PUGAZHENTHI R	40	46	86	2
25	920422214025	22UBT015	RAGUL K	40	50	90	2
26	920422214026	22UBT012	SAKTHI SHIVANI K	40	48	88	2
27	920422214027	22UBT005	SAKTHI SHYAMALA M S	40	48	88	2
28	920422214028	22UBT034	SANKARAPANDIAN P	40	48	88	2
29	920422214029	22UBT018	SARON MERLINE	40	48	88	2
30	920422214030	22UBT030	SELVA MURUGAN G	40	46	86	2
31	920422214031	22UBT013	SELVA RUBAN M	40	48	88	2
32	920422214032	22UBT029	SHARMILA R	40	46	86	2
33	920422214033	22UBT003	SHIBI JAMES RAJA R	40	46	86	2
34	920422214034	22UBT017	SHUNMUGHI K V	40	48	88	2
35	920422214035	22UBT028	SUMATHI S	40	46	86	2
36	920422214036	22UBT041	SURUTHI N	40	48	88	2
37	920422214037	22UBT031	SWETHA S	40	46	86	2

KAMARAJ

Industry Certified Value Added Programme

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Department: Biotechnology Regulation: R2021

Year: 2023-24 Semester: Even

38	920422214038	22UBT032	J VAISHNAVI RISHIKAA	40	46	**86**	**2**
39	920422214039	22UBT020	S VARSHINI	40	48	**88**	**2**
40	920422214040	22UBT016	V K VIBHU PURUSHOTH	40	46	**86**	**2**
41	920422214041	22UBT021	VISHNUVARDHAN RM	40	46	**86**	**2**

VAP Coordinators
Dr S.Karthikumar
Dr K.Geetha
Dr R.Shyam Kumar

HoD/BT
Dr R.Shyam Kumar

* Required

1. Roll Number *

2. Register Number *

3. Name *

4. Date *

Feedback on General aspects of Value Added Programme

5. 1. The programme provided an insight to apply the knowledge gained for development of a small scale industry. *

☆ ☆ ☆ ☆ ☆

6. 2. The programme provided an insight to identify and analyze simple solutions for industrial applications *

☆ ☆ ☆ ☆ ☆

7. 3. The programme provided an insight to design solutions for environmental problems *

☆ ☆ ☆ ☆ ☆

8. 4. The programme provided an insight to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data in various entrepreneurial ventures *

☆ ☆ ☆ ☆ ☆

9. 5. The programme provided an insight to create, select, and apply appropriate techniques, resources, and modern engineering tools and software *

☆ ☆ ☆ ☆ ☆

10. 6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings *

☆ ☆ ☆ ☆ ☆

11. 7. The programme provided an insight to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. *

☆ ☆ ☆ ☆ ☆

Feedback on Sessions

Give fair feedback on each session.

12. 8. Rate the course module and content of the Value added programme. *

☆ ☆ ☆ ☆ ☆

13. 9. Rate the infrastructure facilities provided to conduct the programme. *

☆ ☆ ☆ ☆ ☆

14. 10. The allotted time to complete the task given during the programme was sufficient *

☆ ☆ ☆ ☆ ☆

15. 11. Rate the Theory sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** *

☆ ☆ ☆ ☆ ☆

16. 12. Rate the basic Hands-on sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** by Internal Resources. *

☆ ☆ ☆ ☆ ☆

17. 13. Rate the Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry *

☆ ☆ ☆ ☆ ☆

18. 14. Rate the Industrial training on Value addition and Commerce from Seaweeds. *

☆ ☆ ☆ ☆ ☆

19. 15. Overall how will you rate the Value added programme. *

☆ ☆ ☆ ☆ ☆

Suggestions for Improvement

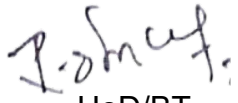
20. 16. Write any two best features of the Value added programme. *

21. 17. Write any two features that can be improved in the Value added programme. *

22. 18. Please give your valuable suggestions for the improvement of the programme. *

Programme Coordinators

Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar



HoD/BT

Dr R.Shyam Kumar

VAP FEEDBACK FORM: ALGAL TECHNOLOGY AND APPLICATIONS 2023-24

40	04:35	Closed
Responses	Average time to complete	Status

1. Roll Number

40
Responses

Latest Responses
"22UBT040 "
"22ubt029"
"22ubt042"

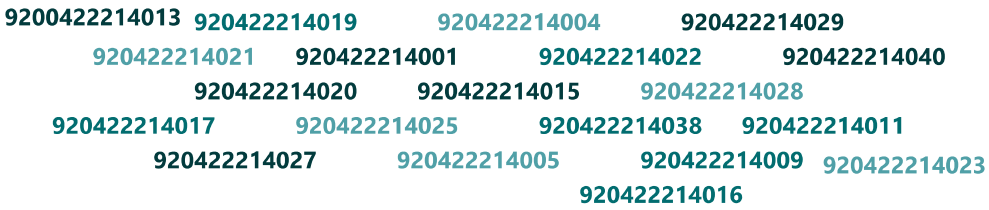
1 respondents (**3**%) answered **22UBT024** for this question.

2. Register Number

40
Responses

Latest Responses
"920422214018"
"9204222140"
"920422214012"

1 respondents (**3**%) answered **920422214015** for this question.



3. Name

40
Responses

Latest Responses
"Nancy G "
"Sharmila R"
"N.keerthana "

4 respondents (**10**%) answered **S** for this question.

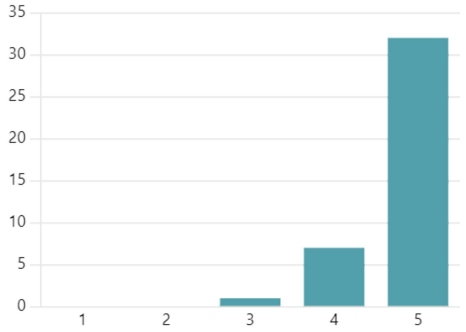
4. Date

40
Responses

Latest Responses
"2024-02-12"
"2024-02-12"
"2024-02-12"

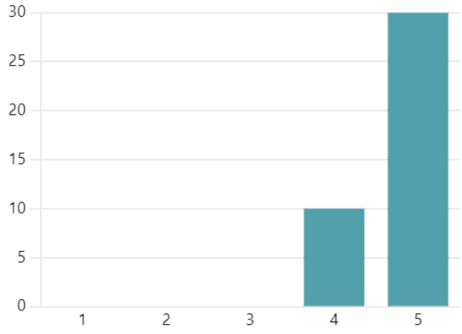
5. 1. The programme provided an insight to apply the knowledge gained for development of a small scale industry.

4.78
Average Rating



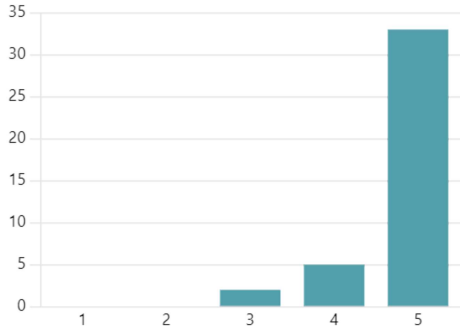
6. 2. The programme provided an insight to identify and analyze simple solutions for industrial applications

4.75
Average Rating



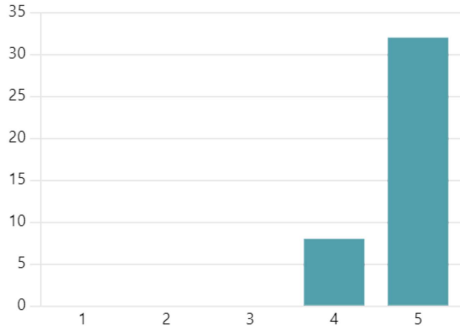
7. 3. The programme provided an insight to design solutions for environmental problems

4.78
Average Rating



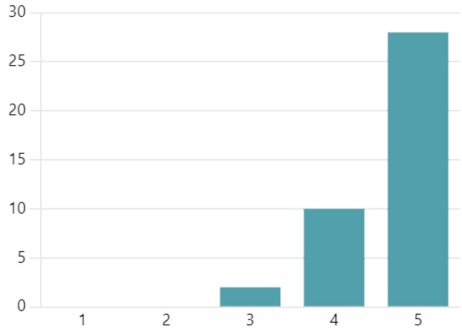
8. 4. The programme provided an insight to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data in various entrepreneurial ventures

4.80
Average Rating



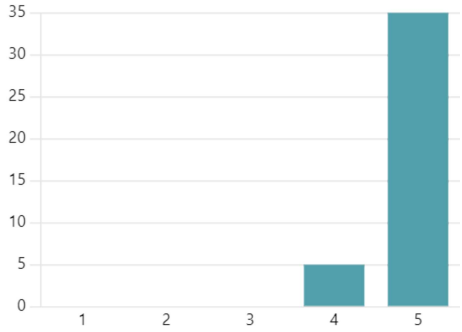
9. 5. The programme provided an insight to create, select, and apply appropriate techniques, resources, and modern engineering tools and software

4.65
Average Rating



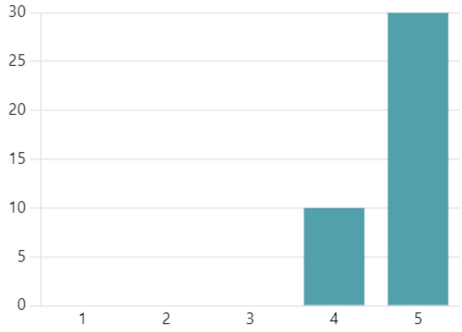
10. 6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings

4.88
Average Rating



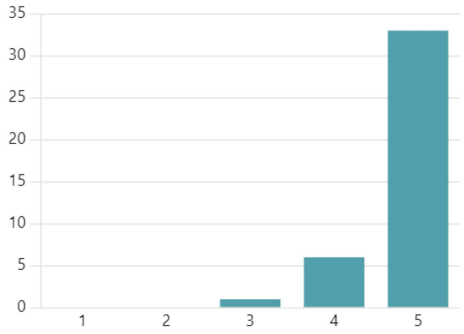
11. 7. The programme provided an insight to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

4.75
Average Rating



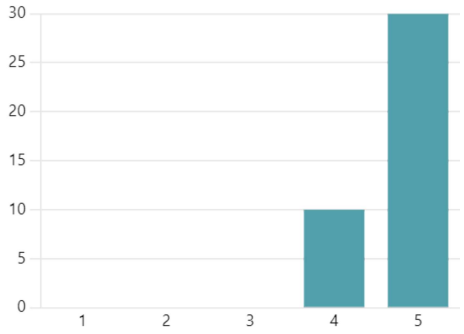
12. 8. Rate the course module and content of the Value added programme.

4.80
Average Rating



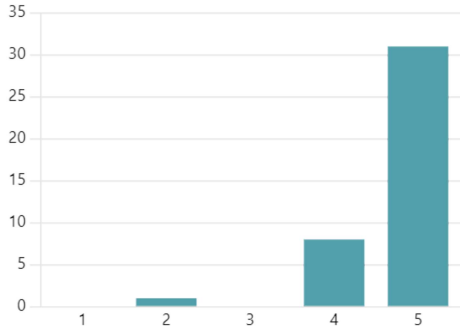
13. 9. Rate the infrastructure facilities provided to conduct the programme.

4.75
Average Rating



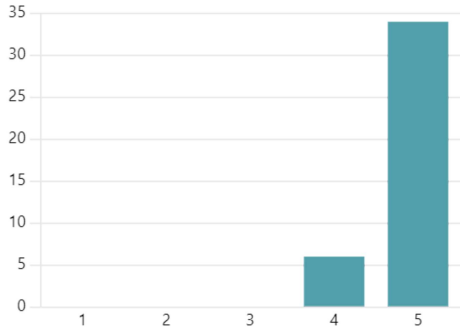
14. 10. The allotted time to complete the task given during the programme was sufficient

4.72
Average Rating



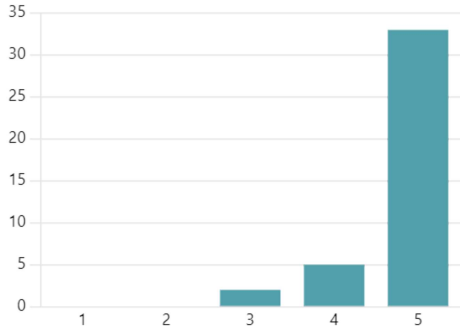
15. 11. Rate the Theory sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS**

4.85
Average Rating



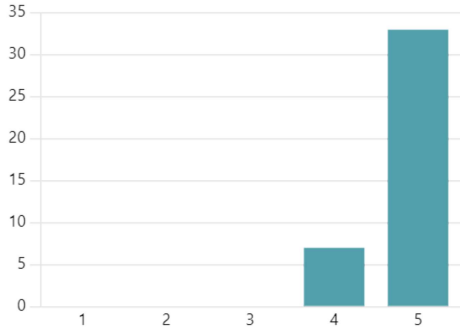
16. 12. Rate the basic Hands-on sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** by Internal Resources.

4.78
Average Rating



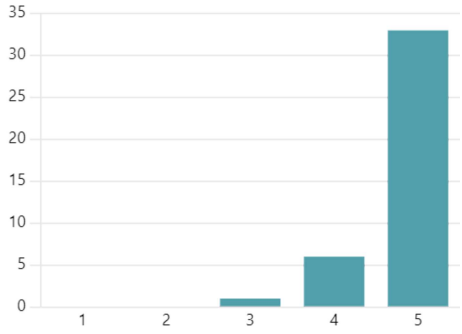
17. 13. Rate the Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry

4.83
Average Rating



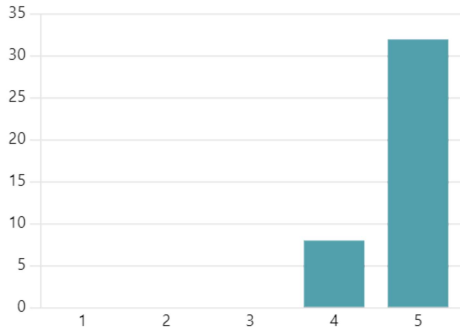
18. 14. Rate the Industrial training on Value addition and Commerce from Seaweeds.

4.80
Average Rating



19. 15. Overall how will you rate the Value added programme.

4.80
Average Rating



20. 16. Write any two best features of the Value added programme.

40
Responses

Latest Responses

"Help in industrial perspective, encouragement to develop innovative produc..."

"IV, hands on training"

"Improving the employability skills of students, provide students an understa..."

10 respondents (**25**%) answered **Product** for this question.

21. 17. Write any two features that can be improved in the Value added programme.

40
Responses

Latest Responses

"Duration of the program"

"Lab facilities"

"A company adds to its products, service's before offering them to customers"

4 respondents (**10**%) answered **algal technology** for this question.

22. 18. Please give your valuable suggestions for the improvement of the programme.

39
Responses

Latest Responses

"Duration of hands on in field"

"Lab facilities "

"Nill"

Update

5 respondents (**13**%) answered **Nil** for this question.

Programme Coordinators

Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar

HoD/BT

Dr R.Shyam Kumar

View results

Respondent

40 Anonymous

00:06
Time to complete

1. Roll Number *

22UBT040

2. Register Number *

920422214018

3. Name *

Nancy G

4. Date *

2/13/2024

Feedback on General aspects of Value Added Programme

5. 1. The programme provided an insight to apply the knowledge gained for development of a small scale industry. *

☆ ☆ ☆ ☆ ☆

6. 2. The programme provided an insight to identify and analyze simple solutions for industrial applications *

☆ ☆ ☆ ☆ ☆

7. 3. The programme provided an insight to design solutions for environmental problems *

★ ★ ★ ★ ★

8. 4. The programme provided an insight to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data in various entrepreneurial ventures *

★ ★ ★ ★ ★

9. 5. The programme provided an insight to create, select, and apply appropriate techniques, resources, and modern engineering tools and software *

★ ★ ★ ★ ☆

10. 6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings *

★ ★ ★ ★ ★

11. 7. The programme provided an insight to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. *

★ ★ ★ ★ ★

Feedback on Sessions

Give fair feedback on each session

12. 8. Rate the course module and content of the Value added programme. *

★ ★ ★ ★ ★

13. 9. Rate the infrastructure facilities provided to conduct the programme. *

★ ★ ★ ★ ★

14. 10. The allotted time to complete the task given during the programme was sufficient *

★ ★ ★ ★ ☆

15. 11. Rate the Theory sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** *

★ ★ ★ ★ ★

16. 12. Rate the basic Hands-on sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** by Internal Resources *

★ ★ ★ ★ ★

17. 13. Rate the Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry *

★ ★ ★ ★ ★

18. 14. Rate the Industrial training on Value addition and Commerce from Seaweeds. *

★ ★ ★ ★ ★

19. 15. Overall how will you rate the Value added programme. *

★ ★ ★ ★ ★

Suggestions for Improvement

20. 16. Write any two best features of the Value added programme. *

Help in industrial perspective, encouragement to develop innovative products

21. 17. Write any two features that can be improved in the Value added programme. *

Duration of the program

22. 18. Please give your valuable suggestions for the improvement of the programme. *

Duration of hands on in field

Dr K. Gautha Dr S. Karthikeyan Dr R. Shyam Kumar

View results

Respondent
8 Anonymous

04:04
Time to complete

1. Roll Number *

22ubt004

2. Register Number *

920422214009

3. Name *

M.Helen Gracelin Joy

4. Date *

2/12/2024

Feedback on General aspects of Value Added Programme

5. 1. The programme provided an insight to apply the knowledge gained for development of a small scale industry. *

★ ★ ★ ★ ★

6. 2. The programme provided an insight to identify and analyze simple solutions for industrial applications *

★ ★ ★ ★ ★

7. 3. The programme provided an insight to design solutions for environmental problems *

★ ★ ★ ★ ★

8. 4. The programme provided an insight to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data in various entrepreneurial ventures *

★ ★ ★ ★ ★

9. 5. The programme provided an insight to create, select, and apply appropriate techniques, resources, and modern engineering tools and software *

★ ★ ★ ★ ★

10. 6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings *

★ ★ ★ ★ ★

11. 7. The programme provided an insight to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. *

★ ★ ★ ★ ★

Feedback on Sessions

Give fair feedback on each session

12. 8. Rate the course module and content of the Value added programme. *

★ ★ ★ ★ ★

13. 9. Rate the infrastructure facilities provided to conduct the programme. *

★ ★ ★ ★ ★

14. 10. The allotted time to complete the task given during the programme was sufficient *

★ ★ ★ ★ ★

15. 11. Rate the Theory sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** *

★ ★ ★ ★ ★

16. 12. Rate the basic Hands-on sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** by Internal Resources. *

★ ★ ★ ★ ★

17. 13. Rate the Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry *

★ ★ ★ ★ ★

18. 14. Rate the Industrial training on Value addition and Commerce from Seaweeds. *

★ ★ ★ ★ ★

19. 15. Overall how will you rate the Value added programme. *

★ ★ ★ ★ ★

Suggestions for Improvement

20. 16. Write any two best features of the Value added programme. *

Growth of algae,making of agar

21. 17. Write any two features that can be improved in the Value added programme. *

Nothing

22. 18. Please give your valuable suggestions for the improvement of the programme. *

More theoretical input

Dr K. Geetha Dr S. Kanthikumar Dr R. Shyam Kumar

View results

Respondent

1 Anonymous

01:27
Time to complete

1. Roll Number *

22UBT024

2. Register Number *

920422214015

3. Name *

Mohamed Aasim M

4. Date *

2/12/2024

Feedback on General aspects of Value Added Programme

5. 1. The programme provided an insight to apply the knowledge gained for development of a small scale industry. *

★ ★ ★ ★ ★

6. 2. The programme provided an insight to identify and analyze simple solutions for industrial applications *

★ ★ ★ ★ ★

7. 3. The programme provided an insight to design solutions for environmental problems *

★ ★ ★ ★ ★

8. 4. The programme provided an insight to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data in various entrepreneurial ventures *

★ ★ ★ ★ ★

9. 5. The programme provided an insight to create, select, and apply appropriate techniques, resources, and modern engineering tools and software *

★ ★ ★ ★ ★

10. 6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings *

★ ★ ★ ★ ★

11. 7. The programme provided an insight to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change *

★ ★ ★ ★ ★

Feedback on Sessions

Give fair feedback on each session.

12. 8. Rate the course module and content of the Value added programme. *

★ ★ ★ ★ ★

13. 9. Rate the infrastructure facilities provided to conduct the programme. *

★ ★ ★ ★ ★

14. 10. The allotted time to complete the task given during the programme was sufficient *

★ ★ ★ ★ ★

15. 11. Rate the Theory sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** *

★ ★ ★ ★ ★

16. 12. Rate the basic Hands-on sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** by Internal Resources *

★ ★ ★ ★ ★

17. 13. Rate the Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry *

18. 14. Rate the Industrial training on Value addition and Commerce from Seaweeds. *

19. 15. Overall how will you rate the Value added programme. *

Suggestions for Improvement

20. 16. Write any two best features of the Value added programme. *

New knowledge & Hands on training

21. 17. Write any two features that can be improved in the Value added programme. *

Time & Travel

22. 18. Please give your valuable suggestions for the improvement of the programme. *

None

Dr K. Geetha Dr S. Karthikeyan Dr R. Shyam Kumar

View results

Respondent

20 Anonymous

04:09

Time to complete

1. Roll Number *

[redacted]

2. Register Number *

[redacted]

3. Name *

[redacted]

4. Date *

[redacted]

Feedback on General aspects of Value Added Programme

5. 1. The programme provided an insight to apply the knowledge gained for development of a small scale industry *

★ ★ ★ ★ ☆

6. 2. The programme provided an insight to identify and analyze simple solutions for industrial applications *

★ ★ ★ ★ ☆

7. 3. The programme provided an insight to design solutions for environmental problems *

★ ★ ★ ☆ ☆

8. 4. The programme provided an insight to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data in various entrepreneurial ventures *

★ ★ ★ ★ ☆

9. 5. The programme provided an insight to create, select, and apply appropriate techniques, resources, and modern engineering tools and software *

★ ★ ★ ☆ ☆

10. 6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings *

★ ★ ★ ★ ☆

11. 7. The programme provided an insight to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. *

★ ★ ★ ★ ☆

Feedback on Sessions

Give fair feedback on each session.

12. 8. Rate the course module and content of the Value added programme. *

★ ★ ★ ☆ ☆

13. 9. Rate the infrastructure facilities provided to conduct the programme. *

★ ★ ★ ★ ☆

14. 10. The allotted time to complete the task given during the programme was sufficient *

★ ★ ☆ ☆ ☆

15. 11. Rate the Theory sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** *

★ ★ ★ ★ ☆

16. 12. Rate the basic Hands-on sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** by Internal Resources. *

★ ★ ★ ☆ ☆

17. 13. Rate the Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry *

★ ★ ★ ★ ☆

18. 14. Rate the Industrial training on Value addition and Commerce from Seaweeds. *

★ ★ ★ ★ ☆

19. 15. Overall how will you rate the Value added programme. *

★ ★ ★ ★ ☆

Suggestions for Improvement

20. 16. Write any two best features of the Value added programme. *

How to start company and Entrepreneurship

21. 17. Write any two features that can be improved in the Value added programme. *

22. 18. Please give your valuable suggestions for the improvement of the programme. *

Dr K. Gupta Dr S. Karthikeyan Dr R. Shyamkumar

View results

Respondent
33 Anonymous

08:51
Time to complete

1. Roll Number *

22ubt030

2. Register Number *

920422214030

3. Name *

G.Selva Murugan

4. Date *

2/12/2024

Feedback on General aspects of Value Added Programme

5. 1. The programme provided an insight to apply the knowledge gained for development of a small scale industry. *

☆ ☆ ☆ ☆ ☆

6. 2. The programme provided an insight to identify and analyze simple solutions for industrial applications *

☆ ☆ ☆ ☆ ☆

7. 3. The programme provided an insight to design solutions for environmental problems *

★ ★ ★ ★ ★

8. 4. The programme provided an insight to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data in various entrepreneurial ventures *

★ ★ ★ ★ ★

9. 5. The programme provided an insight to create, select, and apply appropriate techniques, resources, and modern engineering tools and software *

★ ★ ★ ★ ★

10. 6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings *

★ ★ ★ ★ ★

11. 7. The programme provided an insight to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. *

★ ★ ★ ★ ★

Feedback on Sessions

Give fair feedback on each session.

12. 8. Rate the course module and content of the Value added programme. *

★ ★ ★ ★ ★

13. 9. Rate the infrastructure facilities provided to conduct the programme. *

★ ★ ★ ★ ★

14. 10. The allotted time to complete the task given during the programme was sufficient *

★ ★ ★ ★ ★

15. 11. Rate the Theory sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** *

★ ★ ★ ★ ★

16. 12. Rate the basic Hands-on sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS** by Internal Resources. *

★ ★ ★ ★ ★

17. 13. Rate the Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry *

★ ★ ★ ★ ★

18. 14. Rate the Industrial training on Value addition and Commerce from Seaweeds. *

★ ★ ★ ★ ★

19. 15. Overall how will you rate the Value added programme. *

★ ★ ★ ★ ★

Suggestions for Improvement

20. 16. Write any two best features of the Value added programme. *

Learn new things about seaweed , seaweed cultivation and seaweed products

21. 17. Write any two features that can be improved in the Value added programme. *

More practical section

22. 18. Please give your valuable suggestions for the improvement of the programme. *

Nothing

Dr K. Gunthe Dr S. Karthikumar Dr R. Shyam Kumar

KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added Programme

On

ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

SUMMARY REPORT

A five days Industry Certified Value Added Programme entitled "**ALGAL TECHNOLOGY AND APPLICATIONS**" was organized by Department of Biotechnology, Kamaraj College of Engineering and Technology, Virudhunagar, in association with **AK Seaweeds, Ramanathapuram**, from 5th to 8th and 12th February 2024 for II B.Tech Biotechnology students. The major objective of this program was to give an insight on basics of Algal Technology and Entrepreneurship development to the students and to provide hands-on training in seaweed cultivation and product development so that students will be able to learn the basic aspects of seaweed cultivation and apply them towards product development from seaweed, fostering innovation and sustainable business practices. "Algae" is an application part of Microbiology and Industrial biotechnology course work the students have learnt. This VAP helped them to develop entrepreneurship focus on Algae based product development.

Day 1 of the programme started with a short Inauguration session where our Head of the Department **Dr. R.Shyam Kumar** and **Dr S.Karthikumar**, ASP/BT introduced the theme of the VAP. This was followed by a sessions on the basic Introduction Theory behind Algae and its classification by **Mr Selva Kumar (resource person).** The afternoon session was also handled by **Mr Selva Kumar** wherein he gave an introduction on algal cultivation techniques and the market demand. Additionally, various samples of seaweed were presented, allowing participants to explore the range of species and their potential applications.

Day 2 started with an interesting session on Applications of seaweed by **Mr Jesudas** of AK seaweed who gave a detailed insight into various fields where seaweed based products are being used successfully. This was followed by a session on various procedures used for extracting agar agar and alginate from dry seaweed samples. The afternoon session of Day 2 was a hands-on session on preparation of agar agar and alginate from seaweed samples which was handled by Mr Jesudas.

Day 3 was planned as an industrial visit to AK seaweed, Ramnathapuram for a hands-on training on large scale cultivation of Algae and production of Algae based products. The students were taken to the industry in two buses accompanied by **Dr. R. Shyam Kumar, Dr. S. Karthikumar, and Dr. D. Pradipa**. The students visited the production unit of AK Seaweed for hands-on training in large-scale production. Additionally, they toured the automated production unit under the **Fishery Department of Rameswaram**, where **Inspector Sathesh and Mr. Selva Kumar** from the Fishery department addressed the students. Then they headed to a seaweed cultivation site where they had hands-on experience in **raft building, roping techniques, and seeding techniques**.

On **Day 4**, the students were divided into eight teams and tasked with developing innovative commercial products from agar and its waste. Mr. Jesudas, an industrial expert, assisted the students in refining their ideas into valuable products. The entire day was dedicated to hands-in session where students involved in product development from algae. This was an assignment for internal assessment.

On **Day 5**, the students presented their developed products along with a PPT presentation to Industry experts who evaluated the presentation and the products developed by the students. An exhibition of the products was conducted in the Department. **Dr S. Senthil, Principal and Thiru CA. V.K.Dharmarajan,** Secretary, Managing Board, Kamaraj College of Engineering and Technology, with several other esteemed faculty members of our Research Cell & III Cell visited the exhibits and gave their valuable suggestions. Each team showcased their innovative commercial products derived from agar and its waste, providing detailed explanations of their design, production process, and potential market impact. The presentation served as an opportunity for the students to demonstrate their creativity, problem-solving skills, and entrepreneurial mindset to the college administration and faculty.

The valedictory function took place with students providing oral feedback in the presence of the honorable Principal of Kamaraj College of Engineering and Technology. The vote of thanks was presented by **Dr. K.Geetha**, One of the Programme Coordinators. Overall, the students expressed their appreciation for the enriching five days of value addition to their biotechnology careers.

Programme Coordinators

Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar

HoD/BT

Dr R.Shyam Kumar

KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY

An Autonomous Institution

DEPARTMENT OF BIOTECHNOLOGY

Expenditure details for Industry Certified Value Added Programme on

"ALGAL TECHNOLOGY AND APPLICATIONS"

5th to 8th and 12th February 2024

Programme Coordinators: Dr.S.Karthikumar, Dr. K. Geetha & Dr.R.Shyam Kumar					
S.No	Particulars	Place	Bill No	Date	Amount (Rs.)
1	1 week Training fees on Algal Seaweeds	Ramanathapuram	23-24/0272	22/02/2024	53300
				TOTAL	53300

ABSTRACT	
Amount to be settled by Office via Online account transfer	Rs. 53,300/-

Account details of Resource persons:	Amount to be transferred
Mr. R.P.Rajadurai Jesudoss, Manager, AK Seaweeds, Ramnadapuram, Tamil Nadu E.Mail: jesuramnad@gmail.com, Ph: +919944390334 Bank Name: Tamilnad Mercantile Bank Ltd A/C No: 1311000050311343 Branch: Ramanathapuram IFSC Code: TMBL0000131	Rs. 53,300/-

Programme Coordinators

Dr S.Karthikumar, Dr K.Geetha, Dr R.Shyam Kumar

HoD / BT

Dr R.Shyam Kumar

Tax Invoice

Ak Seaweeds 113/1A, Nochioorani Village Pirappan Valasai Post, Ramanathapuram GSTIN/UIN: 33AAYFA6470G1Z5 State Name : Tamil Nadu, Code : 33 Contact : 9600027197 E-Mail : akseaweeds@gmail.com **Resource person : R.P. Rajadurai jesudoss**	Invoice No. **23-24/0272** Dated **22-Feb-2024**
	Delivery Note Mode/Terms of Payment
	Supplier's Ref. Other Reference(s)
	Buyer's Order No. Dated
	Despatch Document No. Delivery Note Date
	Despatched through Destination
Consignee **Kamaraj College of Engineering and Technology** Virudhunagar State Name : Tamil Nadu, Code : 33	Terms of Delivery
Buyer (if other than consignee) **Kamaraj College of Engineering and Technology** Virudhunagar State Name : Tamil Nadu, Code : 33	

Sl No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Disc. %	Amount
1	**1 week Training on Algae Seaweed**		41.00 (Person)	1300.00			**53,300.00**
	Total						**₹ 53,300.00**

Amount Chargeable (in words) E & O.E

INR Fifty Three Thousand Three Hundred Only

HSN/SAC	Taxable Value
Resource person : R.P. Rajadurai jesudoss	53,300.00
Total	**53,300.00**

Tax Amount (in words) : **NIL**

Bank Details : R.P. Rajadurai Jesudoss
Bank Name : TMB
A/c No. : 1311000503113 43
Branch & IFS Code : Ramanathapuram &TMBL0000131

Declaration
We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for Ak Seaweeds

Authorised Signatory

This is a Computer Generated Invoice

Tax Invoice

Ak Seaweeds
113/1A Nochioorani Village,Pirappan Valasai Post,
Ramanathapuram
GSTIN/UIN 33AAYFA6470G1Z5
State Name Tamil Nadu, Code : 33
Contact 9600027197
E-Mail akseaweeds@gmail.com
Resource person : R.P. Rajadurai jesudoss

Invoice No.	Dated
23-24/0272	**22-Feb-2024**
Delivery Note	Mode/Terms of Payment
Supplier's Ref.	Other Reference(s)
Buyer's Order No.	Dated
Despatch Document No.	Delivery Note Date
Despatched through	Destination

Consignee
Kamaraj College of Engineering and Technology
Virudhunagar
State Name : Tamil Nadu, Code : 33

Terms of Delivery

Buyer (if other than consignee)
Kamaraj College of Engineering and Technology
Virudhunagar.
State Name : Tamil Nadu, Code : 33

Sl No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Disc. %	Amount
1	**1 week Training on Algae Seaweed**		**41.00 (Person)**	**1300.00**			**53,300.00**
	Total						**₹ 53,300.00**

E. & O.E

Amount Chargeable (in words)
INR Fifty Three Thousand Three Hundred Only

HSN/SAC	Taxable Value
Resource person : R.P. Rajadurai jesudoss	53,300.00
Total	**53,300.00**

Tax Amount (in words) : **NIL**

Bank Details : R.P. Rajadurai Jesudoss
Bank Name : TMB
A/c No. : 131100050311343
Branch & IFS Code : Ramanathapuram &TMBL0000131

for Ak Seaweeds

Authorised Signatory

Declaration
We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

This is a Computer Generated Invoice