

(An Autonomous Institution - AFFILIATED TO ARRA UNIVERSITY, CHENNA)

S.P.G. Childambara Nadar - C. Nagaziarrat Campus

S.P.G.C. Nagar, K. Vellakutarn -- 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

VAP Coordinators

Dr R. Shyam Kumar

HoD/BT

VAC Inharge S. Milaushii- CSE Vented)



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S.P.G.Chidambara Nadar - C.Nagammal Campus
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DEPARTMENT OF BIOTECHNOLOGY

SI 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
	Category:		
6	Theory/Lab/Hands- on/Skill based etc	:	Hands-on/Skill based
7	Name and Details of the Joint-organization (industry/NGO etc) if any	:	 AK Seaweeds, 113/1A Nochioorani Villagae, Ramanathapuram (Dist) 623517, Tamil Nadu, India. Phycospora Breeding & Propagate, 15/16A, Sallimalai, GP Road, Ramanathapuram 623526, Tamil Nadu, India.
8	Resource person details	:	 Mr. R.P.Rajadurai Jesudoss, Manager, AK Seaweeds, Ramnadapuram, Tamil Nadu Mr M.Selva Kumar, Technical Lead, Phycospora Breeding Propagate, 15/16A, Sallimalai, GP Road, Ramanathapuram 623526
			 Dr.R.Shyam Kumar (Head/BT & Convener)
			2. Dr.K.Geetha (Associate Professor / BT &
9	Three Member Committee details	:	Member)
	Committee details		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
	Period (From-To)	:	5 th to 8 th and 12 th February 2024
2	I dilou (I iom xo)		1. Department of Biotechnology, KCET
3	Venue	: ,	AK Seaweeds, 113/1A Nochioorani Villagae, Ramanathapuram

VAP Coordinators

W. S. Karlli kuman

M. R. Shyam Keuran

Dean (Academic Courses)

Dr R. Swesh Schn



DEPARTMENT OF BIOTECHNOLOGY Industry Certified Value Added Programme

ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

Enclosures:

SI No	Check List	Availability
1	Institution Approval Copy	Same and the same
2	Circular	V
3	Syllabus Copy with Course outcomes	Val.
4	BoS Approval	V
5	Three Member Committee MoM	1
6	Geo-Tagged Photos	V
7	Certificates of all participants	A commence of the commence of
8	Examination Schedule	No.
9	Questions & Answer Keys	
10	Attendance Sheet	Walter Committee
11	Evaluated Answer script	Land Control of the C
12	Test Report	
13	Mark Statement	Andrew Control of the
14	Grade Sheet	
15	Feedback form	harmon .
16	Feedback analysis and Report	And the state of t
17	Programme Summary / Report	Name of the last o
18	Students' oral feedback (recorded video)	
19	VAC - Short Video	

VAP Coordinators

D. K. Gulla D. S. Kulkkunan

D. R. Shynn Kunan

Into Bit On R. Styra Kaman





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APPROVAL BOOK

- 12			

- SL.No.

Date 19/1/24

Respected Sir, Approval may please be given to conduct Value added course for 8" year BT in association with AK Seaweeds. Ramanathapiwam in the field of Algal Technology, as per the module attached during Approval may also be given to soldent Rs. 1300/ 5th feb. 24 10 9th feb. 24. per shirtent in god yy BT.

Signature of Staff

VAC - coordinators: Do. K. Geetha & Dr. J. Karthithuray

OFFICE USE

1) Account Head

2) Budget allotted

3) Amount committed / Spent sofar

4) Balance available

Administrative Officer

: Value Added Com.

Al Shidents (a. R. 17/20)

R. 53.300/-

Secretar



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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		polymers and plications	Methods of Extraction of Bio polymers from algae		ession on Bio extraction
07/02/2024	Industrial vis	it to Fisheries Dep	artment at Ramanathap	uram and AK Sea	weeds Industry
08/02/2024	Value add	ition and Commerc	ce 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	6	Workshop Kit (Note Pad, Pen) Rs.20x41	820	820
7	General	Lunch & Snacks to Resource Persons (2 Members)	1000	1,000
8	Miscellaneous	Overhead charges	1,000	1,000
			TOTAL	56,120/-

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

AK SEAWEEDS9 101124

113/1A, Nochloorani Village, Pirappan Valasai (Po), Ramanathapuram - 623 516.

Tamilaadu, India,







Certificate: Member in TBI-ABIS (TNAU).
Certificate by TNV, ISO 9001 Series and 100% Organic.

(c) +91 9600 027 197 / 6374 351 714

info@akseaweeds.com

www.akseaweeds.com



B.P.G. Childrenters Notes - C. Negamora Company B.P.G.C. Weger, R. Velskyslem - CCL 701 Dean VRCDHUNGGARD.

Resource Person Details

Name of Programme

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

Same of Coordinator

: Dr. N. Kurbhkumar, Dr. K. Greetha & Dr. R. Shyam Kumar

1. To devoke tools for deciding the resoner persons for the while added programs

	Expertise with cuspect to domain asso / title of the programms	Has 7 years of transmig experience
narce Persons	Espertise (Traching Research, Sebatty, Others, (f. any)	Has 7 years of training experience and is also the manager
Details of Doternal Researce Persens	Name & official addrson, Ernal Id. Ph. No.	Mr. R.P.Rajadurai Jesudess, Manager, AK Serverodi, Remnadopuran, Tami Nadu E Mail postanna desprint com Ph. +919944390334
	Expertiss with respect to domain area: 100s of the	
d Konspran	Esperitus (Teaching, Research, Indianay, Othan, if any)	
Details of Internal Researces	Nume & official address, Local H, Pt. No.	LLETA Nochoorum Villagae, Rammothaparam (Des) 623517, Tamil Nada, India
Industry	Institute Associated with if any	AK Seaweeds,
1	Department TDP Cell	Algal Technology Department Department Biotechnology Department
1	Played Played	Algal
	Chart	II B Toch
	* 2	

	Algal Cultivations and Sometion	Physical Breding & Propagate	15/16A, Sallimala, GP Road, Ramara thepurum 623 S26, Temil Nacta, India		Mr M.Selva Kumar, Testmosil Lead, Phycospora Breeding & Propagate, 15/16A, Sallimalai, GP Road, Ramanathapuram 623526 F. mail. seltembes olgonoil com Phr. +91 9942684175	of the Industry at Expert in cultivation of algae and esonwring the biomass into valuable products.	Has many years of experience
Separation The Court	The state of the s	->1	Signature of Training In-charge	nution .	9	J. M. J.	



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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		Bio polymers r applications	Methods of Extraction of Bio polymers from algae	Hands-on Session on B polymer extraction	
07/02/2024	Industria	al visit to Fisher	ies Department at Ra Industry	manathapuram	and AK Seaweeds
08/02/2024	Val	ue addition and Seawe	Commerce from eds	Han	ds-on session
12/02/2024		Student Pre	sentation	Validation through test	Valedictory Session

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

Copy to:

B.Tech.Biotechnology- II year B.Tech Class BT Faculty members

Office Superintendent

To file

PRINCIPAL

Dr. S. SENTHIL, M.E., Ph.D.,

FRINCIPAL

KAMARAJ College of Engineering and Technology (Autonomous)

S.P.G. Chidamhara Nadar - C. Nagammal Campus, S.P.G.C. Pingar, K. Vellakulam - 625 701. (Near VIRUDHUNAGAR).

Course Code	Course Name		L	T	P	С
VAP	ALGAL TECHNOLOGY APPLICATIONS	AND				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.	К3
CO5	Apply the algal systems in biotechnological product development.	К3

3. Course Syllabus

UNIT I INTRODUCTION TO ALGAE

06

Total: 30 Hours

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

Khuthe Formus.

HoD/BT

Dr R.Shyam Kumar

Dr S.Karthikumar, Dr K.Geetha, 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%222666d919-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	Alumni
1		Technology Calicut, NIT Campus -	
		Calicut	

S.No.	Name of the Faculty	Designation	Signature
1	Dr. R. Shyam Kumar	Professor and Head	P. Shrefador.
2	Dr. R. Baskaran	Associate Professor	Le hundring
3	Dr. K. Geetha	Associate Professor	regular 3 hot
4	Dr. S. Karthikumar	Associate Professor	
5	Dr. A. Ronaldo Anuf	Assistant Professor	12/1/210
6	Dr. D. Pradiba	Assistant Professor	1 3 10/23
7.	Er. R. Amutha Lakshmi	Assistant Professor	3/10/03
3	Er. K. Chitradevi	Assistant Professor	n. Clitudini ostor
)	Er. Karl Joseph Samuel	Assistant Professor	1,13
10.	Er. A.Ganga	Assistant Professor	aug

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 6 th BoS Meeting	Action Taken	
006.04.01	Dr. P. Suresh Kumar, Academic Council	The suggestions provided by the	
	Nominee suggested to include recent book	experts were taken and changes	
	editions in text and reference books.	were made in the appropriate	
	Dr. S. Venkatesan, Anna University	syllabus	
	Nominee suggested latest version of		

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

• 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 			

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		
	이 그리 취하는 하늘 얼마 있는 맛이 하셨다고 살아 그렇게 하다.		

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	Subject Name Month & Year Stude		No of Students Enrolled Passed	
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	Inoc22-ht57	Environmental Biotechnology	Oct 2022	5
3.	20UBT027	SUBHIKSHA.S	noc/s-cell	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. 	
	Student Internship Completion details	The HOD shared the statistical data of the student internship/ Inplant training details for R2020 & R2021	
007.05.02	ţ	 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.
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 The HoD shared the statistical data of the
	student internship/ Inplant training details for
Student Internship details (between 6 th and 7 th meeting)	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.
	preparation and its information Student Internship details

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

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

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

Agenda

- Welcome address Dr.R.Shvam Kumar
- Dissemination of the report of Industry Certified Value-Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" – Dr.K. Geetha.
- Dissemination of the Value Added Programme Guidelines in R2021 Dr. K. Geetha, CP/II BT.
- Dissemination of the report on mode of conduct of examination and evaluation system Dr.S.Karthikumar.
- 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
ī	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 11 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 Academies 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

Associate Professor/BT, Member & II BT CP

Dr S Karthikumar Associate Professor/BT & Member



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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







Preparation of Algal based Products





Programme Coordinators

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

T. Muf.

Dr R.Shyam Kumar

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This is to certify that Mr./Ms. X. ABINANTHAN

APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu Certified Value Added Programme on "ALGAL TECHNOLOGY AND 2nd Year B.Tech.Biotechnology (Reg.No.<u>920422214001</u>) has attended Industry during 5 - 9, February 2024 and secured ____00 %__ in the assessment exam.

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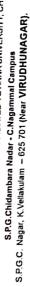
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2nd Year B.Tech.Biotechnology (Reg.No. <u>92.042221400</u>る) has attended Industry Certified Value Added Programme on "ALGAL TECHNOLOGY AND APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5 - 9, February 2024 and secured 90 % in the assessment exam.

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APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu during 5 - 9, February 2024 and secured 86% in the assessment exam.

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during 5th 9, February 2024 and secured 88% in the assessment exam.

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during 5th 9, February 2024 and secured 90% in the assessment exam.

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2 nd Year B.Tech.Biotechnology (Reg.No.920μ2221μ012) has attended Industry APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu AND **TECHNOLOGY** during $5^{ ext{th}}$ - $9,^{ ext{th}}$ February 2024 and secured $\underline{90}\%$ in the assessment exam. Certified Value Added Programme on "ALGAL

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during 5th 9, February 2024 and secured 88 % in the assessment exam.

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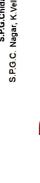








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S. D. Y. Principal





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HoD/BT

S. C. S. Principal













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APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu Certified Value Added Programme on "ALGAL TECHNOLOGY AND 2 nd Year B.Tech.Biotechnology (Reg.No. <u>92の4 22214 02ち</u>)has attended Industry during 5th 9, February 2024 and secured 90 % in the assessment exam.

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during 5^{th} - $9'_{th}$ February 2024 and secured 86% in the assessment exam.

















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This is to certify that Mr./Ms. SUMBTHI. &

2nd Year B.Tech.Biotechnology (Reg.No. 92の422214035。) has attended Industry APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu Certified Value Added Programme on "ALGAL TECHNOLOGY AND

during 5^{th} - 9, February 2024 and secured 86% in the assessment exam.



Coordinator(s)

HoD/BT



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AK Seaweeds



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Marrager AK Seaweeds

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Mariager AK Seaweeds

Coordinator(s) HoD/BT





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This is to certify that Mr./Ms. VARSHINI. &

Certified Value Added Programme on "ALGAL TECHNOLOGY AND 2ndYear B.Tech.Biotechnology (Reg.No. 92の422214039) has attended Industry

APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu

during 5th 9, February 2024 and secured 88 % in the assessment exam.

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

APPLICATIONS" in association with A.K Seaweeds, Ramanathapuram, Tamil Nadu 2nd Year B.Tech.Biotechnology (Reg.No. 920μ 2221μομο) has attended Industry AND during 5"-9," February 2024 and secured 86% in the assessment exam. Certified Value Added Programme on "ALGAL TECHNOLOGY



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AK Seaweeds

TS/UNA HOD/BT Coordinator(s)





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DEPARTMENT OF BIOTECHNOLOGY

CIRCULAR

KAMARAJ / BT / 2023-24 / VAP-II BT

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

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PROGRAMME COORDINATORS

Dr S.Karthikumar

Dr K.Geetha

Dr R.Shyam Kumar

HoD/BT Dr R.Shyam Kumar

Date: 16.02.2024

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" - req

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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DEPARTMENT OF BIOTECHNOLOGY Industry Certified Value Added Programme On "ALGAL TECHNOLOGY AND APPLICATIONS"

5th to 8th and 12th February 2024

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

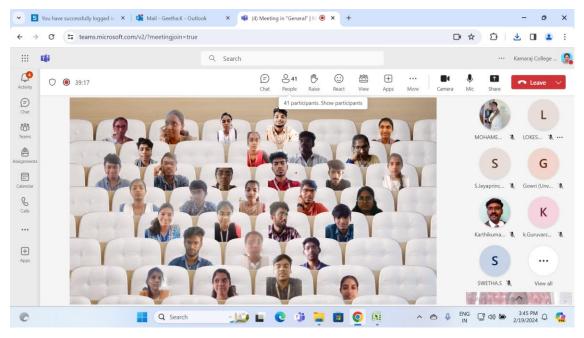


Photo 2, 3 & 4: Students attending Online proctored mode external exam for Value Added Course





Programme Coordinators

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

HoD/BT

Dr R.Shyam Kumar

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r K.Geetha Dr S.Karthikumar

Dr R.Shyam Kumar

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

Feb 19, 2024

Answer all question

Total: 25 Points

This form will record your name, please fill y	our nam	e
[*] Required		

1.	Name *	
2.	Roll No *	
3.	Register No *	
4.	Class *	
5.	Date *	

$25 \times 1 = 25 \text{ Marks}$

Answer all questions

6.	1. S	pot	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) * (1	Separation of agar from bounded water after freezing is done by Point)
	\bigcirc	a) Filteration
	\bigcirc	b) Freeze thawing
	\bigcirc	c) Gravity separation
	\bigcirc	d) Acid precipitation
9.	4. C	entral nodal institute working on algal research * (1 Point)
	\bigcirc	a) CMFRI
	\bigcirc	b) CFTRI
	\bigcirc	c) CSMCRI
	\bigcirc	d) CECRI
10.		lodel agar and carrageenan extraction unit at Mandapam, Tamil Nadu governed under * (1 Point)
	\bigcirc	a) State agriculture department
	\bigcirc	b) State fisheries department
	\bigcirc	c) State coastal department
	\bigcirc	d) State gulf of mannar development department

11. 6. C	Carrageenan was extracted from * (1 Point)
\bigcirc	a) Ulva sp
\bigcirc	b) Kappaphycus sp
\bigcirc	c) Gelidium sp
\bigcirc	d) Sargassam sp
12. 7. S	pot the cultivable red algae * (1 Point)
\bigcirc	A) Sargassam sp
\bigcirc	B) Gelidium sp
\bigcirc	C) Kappaphycus sp
\bigcirc	D) Ulva sp
	appaphycus seaweed is also termed us, based on its patent. 1 Point)
\bigcirc	a) Pepsi seaweed
\bigcirc	b) Aquaagri seaweed
\bigcirc	c) Grand seaweed
\bigcirc	d) Itc seaweed

14.		Iginate recovery from brown algae extracted solution is done by Point)
	\bigcirc	a) Alkali precipitation
	\bigcirc	b) Acid precipitation
	\bigcirc	c) Centrifugal force
	\bigcirc	d) Freeze thawing
15.	10.	E406 was assigned to * (1 Point)
	\bigcirc	a) Sodium alginate
	\bigcirc	b) Agar agar
	\bigcirc	c) Caragennan
	\bigcirc	d) Alginic acid
16.		Alginate, agar agar, carrageenan were grouped by FSSAI under * Point)
	\bigcirc	a) Preservative
	\bigcirc	b) Colorant
	\bigcirc	c) Emulsifier
	\bigcirc	d) Acidifier

17.	12.	Product to be sold among Islamic people should hold * (1 Point)
	\bigcirc	a) Kosher certificate
	\bigcirc	b) ISO certificate
	\bigcirc	c) Fssai certificate
	\bigcirc	d) Halal certificate
18.	13	lews prefer certified products * (1 Point)
	\bigcirc	a) Kosher
	\bigcirc	b) BRC
	\bigcirc	c) Halal
	\bigcirc	d) Iso
19.	14. /	Alginates are extracted from * (1 Point)
	\bigcirc	a) Brown seaweed
	\bigcirc	b) Red seaweed
	\bigcirc	c) Green seaweed
	\bigcirc	d) Micro algae

20.	15. (Cough syrup suspension consist of	as an emulsifier * (1 Point)
	\bigcirc	a) Sodium alginate	
	\bigcirc	b) Magnesium alginate	
	\bigcirc	c) Agar agar	
	\bigcirc	d) Alginic acid	
21.	16. ₋	is used for teeth mold making *	(1 Point)
	\bigcirc	a) Sodium alginate	
	\bigcirc	b) Magnesium alginate	
	\bigcirc	c) Potassium alginate	
	\bigcirc	d) Calcium alginate	
22.	17. /	Alkali used in alginate extraction is * (1 P	oint)
	\bigcirc	a) Sodium carbonate	
	\bigcirc	b) Sodium bicarbonate	
	\bigcirc	c) Sodium hydroxide	
	\bigcirc	d) Sodium sulphate	

23.	18.	Agar is extracted from * (1 Point)
	\bigcirc	a) Red algae
	\bigcirc	b) Green algae
	\bigcirc	c) Brown algae
	\bigcirc	d) Sea grass
24.	19.	On raft cultivation distance between two seedling rope should be * (1 Point)
	\bigcirc	a) 6 inches
	\bigcirc	b) 12 inches
	\bigcirc	c) 3inches
	\bigcirc	d) 24 inches
25.		Cultivation period of Kappaphycus sp on raft will last for days *Point)
	\bigcirc	a) 55
	\bigcirc	b) 45
	\bigcirc	c) 65
	\bigcirc	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
O 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	
O 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	

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Microsoft Forms

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"

5th to 8th and 12th February 2024

EVALUATION QUESTION PAPER WITH KEY

1)	Spot the green marine algae		c) State coastal department
	a) Sargassam sp		d) State gulf of mannar
	b) Gracillaria sp		development department
	c) Turbeneria sp	6)	Carrageenan was extracted from
	d) Ulva sp√		a) Ulva sp
2)	Extraction temperature of agar agar		b) Kappaphycus sp $\sqrt{}$
	°C		c) Gelidium sp
	a) $100 - 110$		d) Sargassam sp
	b) 60-70	7)	Spot the cultivable red algae
	c) 70-80		A) Sargassam sp
	d) 130-140		B) Gelidium sp
3)	Separation of agar from bounded		C) Kappaphycus sp $\sqrt{}$
	water after freezing is done by		D) Ulva sp
	a) Filteration	8)	Kappaphycus seaweed is also
	b) Freeze thawing $\sqrt{}$		termed us, based on its
	c) Gravity separation		patent.
	d) Acid precipitation		a) Pepsi seaweed $\sqrt{}$
4)	Central nodel institute working on		b) Aquaagri seaweed
	algal research		c) Grand seaweed
	a) CMFRI		d) Itc seaweed
	b) CFTRI	9)	Alginate recovery from brown
	c) CSMCRI√		algae extracted solution is done by
	d) CECRI		a) Alkali precipitation
5)	Model agar and carrageenan		b) Acid precipitation $\sqrt{}$

c) Centrifugal force

d) Freeze thawing

10) E406 was assigned to

a) Sodium alginate

extraction unit at mandapam

Tamilnadu was governed under

a) State agriculture department

b) State fisheries department $\sqrt{}$

b)	Agar agar√	c)	Brown algae
c)	Caragennan	d)	Sea grass
d)	Alginic acid	19) On	raft cultivation distance
11) Al	ginate, agar agar, carrageenan	bet	tween two seedling rope should
we	ere grouped by FSSAI under	be	
a)	Preservative	a)	6 inches√
b)	Colorant	b)	12 inches
c)	Emulsifier $\sqrt{}$	c)	3inches
d)	Acidifier	d)	24 inches
12) Pr	oduct to be sold among Islamic	20) Cu	ltivation period of kappaphycus
pe	ople should hold	sp	on raft will last for days
a)	Kosher certificate	a)	55
b)	ISO certificate	b)	45√
c)	Fssai certificate	c)	65
d)	Halal certificate $\sqrt{}$	d)	35
13) Jev	ws prefer certified	21) Ca	rrageenan is widely used in
pro	oducts		
a)	Kosher $\sqrt{}$	a)	Cosmetics
b)	BRC	b)	Ice cream√
c)	Halal	c)	Yoghurt
d)	Iso	d)	lipsticks
14) Al	ginates are extracted from	22) Ag	gar food grade material should
a)	Brown seaweed $\sqrt{}$	po	sses the following mandate
b)	Red seaweed	cei	rtificate to be sold in India
c)	Green seaweed	a)	ISO
d)	Micro algae	b)	$\mathbf{FSSAI} \checkmark$
15) Co	ough syrup suspension consist of	· · · · · · · · · · · · · · · · · · ·	Halal
	as a emulsifier	d)	GMP
a)	Sodium alginate	23) Gr	een seaweeds are rich in
b)	Magnesium alginate	a)	Carbohydrate
c)	Agar agar	b)	Protein $\sqrt{}$
d)	Alginic acid $\sqrt{}$	c)	Lipids
16)	is used for teeth mold	d)	Vitamins
ma	aking	24) Bl	ue green algae is also termed us
a)	Sodium alginate	a)	Hematococcus
b)	Magnesium alginate $\sqrt{}$	b)	Spirulina $\sqrt{}$
c)	Potassium alginate	c)	Azolla
d)	Calcium alginate	d)	Ulva
17) Al	kali used in alginate extraction is	25) Co	mmercial grades of agar is
a)	Sodium carbonate $\sqrt{}$	div	versified on the base of
b)	Sodium bicarbonate	a)	Color
c)	Sodium hydroxide	b)	Gel strength $\sqrt{}$
d)	Sodium sulphate	,	Flavor
18) Ag	gar is extracted from	d)	Bleaching percentage

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

a) Red algae√b) Green algae

Dr R.Shyam Kumar

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Student Name	PARKANTNANTIDES	HEBBOAA	ваштая	PATYADHARSHBALL	H3CAZIGNTB R	RAGUE	SAR THE SHEVANOR.	SAKTHE SHYAMMA MIS	SASKARAPANERASE	SARON MERLINE	SELVASONUGANG	SELVA RUBASS M.	SHARMEAR	SPEED ALVES BOATA R	SHLYMINGUE V.	SUMMITTEE	SUBLITHIN	SWITTINGS.		S VAKSHIMI
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Dr R.Shyam Kumar

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





DEPARTMENT OF BIOTECHNOLOGY Industry Certified Value Added Programme ALGAL TECHNOLOGY AND APPLICATIONS 05/02/2024 to 08/02/2024 & 12/02/2024

Attendance





DEPARTMENT OF BIOTECHNOLOGY Industry Certified Value Added Programme

ALGAL TECHNOLOGY AND APPLICATIONS 05/02/2024 to 08/02/2024 & 12/02/2024

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Attendance	100	100	68	100	160	100	100	100	100	100	100
No of hours	0	0	9	0	0	0	0	0	0	0	0
Total	30	30	24	30	30	30	30	30	30	30	30
12.02.2024	3	3	0	3	3	3	3	3	3	3	3
12.02	3	3	0	3	3	3	3	3	3	3	3
08.02.2024	3	3	3	3	3	3	3	3	3	3	3
08.05	3	3	3	3	3	3	3	3	3	3	3
07.02.2024	3	3	3	3	3	3	3	3	3	3	3
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06.02.2024	3	3	3	3	3	3	3	3	3	3	3
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05.02.2024	3	3	3	3	3	8	3	3	3	3	3
02.02	3	3	3	3	3	3	3	3	3	3	3
Student Name	SELVA RUBAN M	SHARMILA R	SHIBI JAMES RAJA R	SHUNMUGHI K V	SUMATHIS	SURUTHIN	SWETHA S	J VAISHNAVI RISHIKAA	S VARSHINI	V K VIBHU PURUSHOTH	VISHNUVARDHAN RM
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Programme Coordinators
Dr S.Karthikumar
Dr K.Geetha
Dr R.Shyam Kumar

HoD/BT Dr R.Shyam Kumar



Respondent 18

Answer all questions

BALAJIR

20:06

21/25

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

	Time to complete	Points	
1. Name *		Scor	re /0 pts
Balaji R			
2. Roll No *		Scor	re / 0 pts
22UBT002			
	The second secon		
3. Register No *		Score	e /0 pts
920422214003			
4. Class *		Secre	e /Opts
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5. Date *		Scott	e /0 pts
2/19/2024			
25 x 1 = 25 Marks			

X 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	
() ы 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	
✓ Carrect 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 coestal department	
d) State gulf of mannar development department	
✓ Correct 1/1 Points	1 /1 pt
11. 6. Carrageenan was extracted from *	Auto-graded
O a) Uhe sp	
(i) Kappaphyous sp √	
C) Gelicium sp	
(d) Sargassam sp	
✓ Correct 1/1 Points	1 /1 pt Auto-graded
12. 7. Spot the cultivable red algae *	Mary Market
○ A) Sargassam sp	
(8) Gelidium sp	
⑥ C) Kappaphycus sp ✓	
O D) Ulia 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) Aquaagn seaweed	
Ct Grand seaweed	
() d) fit 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	
(iii) Agar agar 🗸	
○ Q Caragennan	
O 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	
(iii) c) Emulsifier 🗸	
d) Acidifier	
✓ Correct 1/1 Points	/ 1 pt Auto-graded
17. 12. Product to be sold among Islamic people should hold *	
17. 12. Product to be sold among islamic people should hold	
a) Kosher certificate	
a) Kosher certificate	
a) Kosher certificate b) ISO certificate	

	Correct 1/1 Points			1 /1 pt Auto-graded
- 18	B. 13. Jews prefer	_ certified products *		
	a) Kosher			
	O b) BRC			
	C) Halal			
	O d) Iso			
	✓ Correct 1/1 Points			1 /1 pt Auto-graded
19	9. 14. Alginates are extracte	ed from *		Auto-graded
	a) Brown seaweed			
) Red seaweed			
) Green seaweed			
) d) Micro algae			
	X Incorrect 0/1 Points			0 / 1 pt Auto-graded
20). 15. Cough syrup suspens	sion consist of as an emulsifier		
	a) Sodium alginate			
	b) Magnesium alginate			
	() Agar agar			
	() d) Alginic acid 🗸			
	× Incorrect 0/1 Points			δ /1 pt Auto-graded
2	. 16 is used for te	eeth mold making *		
	a) Sodium alginate			
	b) Magnesium alginate			
	c) Potassium alginate			
	(ii) Calcium alginate			

22. 17. Alkali used in alginate extraction is *	1 /1 pt Auto-graded
a) Sodium carbonate 🗸	
() b) Sodium bicarbonate	
O Sodium hydroxide	
(d) Sodium sulphate	
✓ Correct 1/1 Points	1 /1 pt
23. 18. Agar is extracted from *	Auto-graded
(iii) a) Red algae	
○ b) Green algae	
C) Brown algae	
Od) 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	
	1- /1 pt
✓ Correct 1/1 Points	Auto-graded
25. 20. Cultivation period of Kappaphycus sp on raft will last for days *	
a) 55	
b) 45 ✓	
c) 65	
(a) 35	

	Correct 1/1 Points		1 /1 p
	26. 21. Carrageenan is widely used in	•	Auto-graded
	a) Cosmetics		
	(ii) lie cream 🗸		
	O Synghurt		
	O lipaticks		
	to opanies		
	✓ Correct 1/1 Points		
9			Auto-graded
6)	A see Agar 1000 grade material should posses the	he following mandate certificate to be sold in India	
	○ a)150		
	(i) b) FSSAI ✓		
	C) Halal		
	O d) GMP		
	✓ Correct 1/1 Points		1 /1pt
21	3. 23. Green seaweeds are rich in *		Auto-graded
	a) Carbohydrate		
	(b) Protein		
	C) Upids		
	(d) Vitamins		
	✓ Correct 1/1 Points		/ t pr Auto-graded
29	24. Blue green algae is also termed us *		
	a) Hematococcus		
	(ii) b) Spirulina 🗸		
	() c) Azolla		
	O) Ulwa		

✓ Incorrect 0/1 Points

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

(a) Color

○ b) Gel strength ✓

C) Flavor

() Bleaching percentage

White Dr. S. Karthi kuman Dr. R. Shyan Kuman

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

Res	 - 4	

13 NANCY.G

22:08
Time to complete

20/25

Points

1.	Name *	Score	10 -1-
	Nancy G	score	/ 0 pts
2.	Roll No ·	Score	/Opts
	22UB1040		
3,	Register No *	Score	/ 0 pts
	920422214018		
4,	Class '	Score	/ 0 pts
	U BT		
5.	Date *	Score	/ O pts
	2/19/2024		

25 x 1 = 25 Marks

Answer all questions

✓ Correct 1/1 Points	1 71	pt
6. 1. Spot the green marine algae *	Auto-graded	
green marine digae		
a) Sargessam sp		
b) Gracillaria sp		
c) Turbeneria sp		
d) Ulva sp √		
✓ Correct 1/1 Points	1 / 1 p Auto-graded	ot
7. 2. Extraction temperature of agar agar «C *		
(a) 100 – 110 🗸		
O b) 60-70		
(c) 70-80		
(d) 130-140		
✓ Correct 1/1 Points	1 /1 pt Auto-graded	t
8. 3. 1) Separation of agar from bounded water after freezing is done	by *	
a) Filteration	•	
c) Gravity separation		
() Acid precipitation		
✓ Correct 1/1 Paints	1 / 1 pt Auto-graded	
9. 4. Central nodal institute working on algal research *		
a) CMFRI		
O b) CFTRI		
(i) CSMCRI V		
() d) CECRI		

Correct		1 /1 pt
10. 5. Model a	ngar and carrageenan extraction unit at Mandapam, Tamil Nadu was governed under *	Auto-graded
(a) State	e agriculture department	
(iii) State	e fisheries department 🗸	
	e coastal department	
(d) State	e gulf of mannar development department	
✓ Correct	1/1 Points	1 /1 pt
11. 6. Carrage	enan was extracted from *	Auto-graded
() a) Ulva	sp —	
b) Kapı	paphycus sp 🗸	
() c) Gelic	dium sp	
	assam sp	
O/ Sarg	osseni Sp	
✓ Correct	1/1 Points	1 / 1 pt Auto-graded
12. 7. Spot the	cultivable red algae *	Note graded
A) Sarg	assam sp	
(B) Gelic	lium sp	
C) Kapp	paphycus sp. 🗸	
O D) Ulva		
<i>O</i> 0, 0.112		
✓ Correct		/ 1 pt Auto-graded
13. 8. Kappaph	nycus seaweed is also termed us, based on its patent. *	William Landing Co.
(iii) A) Pepsi	seaweed	
(d) Aqua	nagri seaweed	
() c) Grand	d seaweed	
() d) lic se	naweed	
The sale and		

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✓ 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	
() Freeze thawing	
✓ Correct 1/1 Points	1 /1 pt Auto-graded
15. 10. E406 was assigned to *	
a) Sodium alginate	
(a) b) Agar ager ✓	
() Caragennan	
d) Alginic acid	
✓ Correct 1/1 Points	1 /1 pt Auto-graded
16. 11. Alginate, agar agar, carrageenan were grouped by FSSAI under *	, and great
a) Preservative	
(b) Colorant	
(i) 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	
(iii) Halal certificate ✓	

Correct 1/1 Poi	nts		1 / 1 pt Auto-graded
18. 13. Jews prefer	certified products *		
(ii) a) Kosher 🗸			
○ b) BRC			
C) Halal			
() d) Iso			
✓ Correct 1/1 Poir	nts		1 / 1 pt Auto-graded
19, 14. Alginates are ex	xtracted from *		
a) Brown seawee	d 🗸		
b) Red seaweed			
C) Green seaweed	1		
) d) Micro algae			
X Incorrect 0/1 Po	pints		0 /1 pt Auto-graded
20. 15. Cough syrup su	spension consist of as an emulsific	er *	
a) Sodium alginat	te		
b) Magnesium alg	ginate		
() Agar agar			
) d) Alginic acid 🗸	,		
× Incorrect 0/1 Po	ints		0 / 1 pt Auto-graded
21. 16 is used	for teeth mold making *		
 a) Sodium alginat 	e		
b) Magnesium alg	ginate 🗸		
c) Potassium algin	nate		
d) Calcium alginat	te		

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	Correct 1/1 Points	1 /1 pt Auto-graded
2.	2. 17. Alkali used in alginate extraction is *	
	(iii) a) Sodium carbonate 🗸	
	(b) Sodium bicarbonate	
	c) Sodium hydroxide	
	() d) Sodium sulphate	
	✓ Correct 1/1 Points	1 /1 pt
23	. 18. Agar is extracted from *	Auto-graded
	(iii) a) Red algae 🗸	
	(b) Green algae	
	C) Brown algae	
	() Sea grass	
	X Incorrect 0/1 Points	0 /1 pt Auto-graded
24	. 19. On raft cultivation distance between two seedling rope should be *	
	a) 6 inches 🗸	
	(i) b) 12 inches	
	C) 3inches	
	(d) 24 inches	
	✓ Carrect 1/1 Points	1 / 1 pt Auto-graded
25	i. 20. Cultivation period of Kappaphycus sp on raft will last for days *	
	() a) 55	
	(a) b) 45 ✓	
	○ c) 65	
	(d) 35	

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× Incorrect 0/1 Points	0 /1 pt
26. 21. Carrageenan is widely used in *	Auto-graded
a) Cosmetics	
○ b) Ice cream ✓	
(iii) Yoghurt	
(d) lipsticks	
У працекз	
✓ 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	
(a) b) FSSAI ✓	
C) Halal	
() d) GMP	
X Incorrect 0/1 Points	0 / 1 pt Auto-graded
28. 23. Green seaweeds are rich in *	
a) Carbohydrate	
(b) Protein V	
C) c) Lipids	
() d) Vitamins	
✓ Carrect 1/1 Points	1 /1 pt Auto-graded
29. 24. Blue green algae is also termed us *	
() a) Hematococcus	
b) Spirulina 🗸	
() Azolla	
d) Ulva	

\checkmark	Correct	1/1 Pc	oints		

/1 pt Auto-graded

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

- (a) Color
- b) Gel strength

 ✓
- () Flavor
- d) Bleaching percentage

Dr.K. Luthe Dr.S. Kartikura Dr. R. Syam Keura

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

Respondent			
33	SELVA MURUGAN.G	25:41	19/25
		Time to complete	Points

1. Name *		Score	/ 0 pts
SELVA MURUGAN G			
2. Roll No *		Score	/ 0 pts
22U81030			
3. Register No *		Score	/ 0 pts
920422214030			
4. Class *		Score	/ 0 pts
2nd year Biotechnology			
5. Date *		Score	/Opts
2/19/2024	6		

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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	
(i) d) Ulva sp	
✓ Correct 1/1 Points	1 /1 pt Auto-graded
7. 2. Extraction temperature of agar agar "C *	
(ii) a) 100 – 110 🗸	
() b) 60-70	
() 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	
() Gravity separation	
() d) Acid precipitation	
✓ Carrect 1/1 Points	1 /1 pt Auto-graded
9. 4. Central nodal institute working on algal research *	
a) CMFRI	
E) CFTRI	
⊕ CSMCRI	
d) CECRI	

X 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	
() Sargassam sp	
	1 /1 pt
✓ Correct 1/1 Points	Auto-graded
12. 7. Spot the cultivable red algae *	
A) Sargassam sp	
B) Gelidium sp	
⑥ C) Kappaphycus sp ✓	
O) 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 14. 9. Alginate recovery from brown algae extracted solution is done by *	1 /1 pt Auto-graded
a) Alkali precipitation	
(iii) Acid precipitation \checkmark	
C) Centrifugal force	
() Freeze thawing	
✓ Correct 1/1 Points	1 /1 pt
15. 10. E406 was assigned to ^	Auto-graded
a) Sodium alginate	
(a) b) Agar agar ✓	
C) Caragennan	
(d) Alginic acid	
X Incorrect 0/1 Points	0 /1 pt Auto-graded
16. 11. Alginate, agar agar, carrageenan were grouped by FSSAI under *	
a) Preservative	
(i) 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	
() Fssai certificate	
(iii) Halal certificate 🗸	

✓ Correct 1/1 Points	
18. 13. Jews prefer certified products *	1 /1 pt. Auto-graded
a) Kosher 🗸	
○ b) BRC	
C) Halai	
O d) Iso	
✓ Correct 1/1 Points	1 41-4
19. 14. Alginates are extracted from *	1 /1 pt Auto-graded
a) Brown seaweed ✓	
b) Red seaweed	
c) Green seaweed	
() d) Micro algae	
✓ Correct 1/1 Points	1 /1pt
20. 15. Cough syrup suspension consist of as an emulsifier *	Auto-graded
a) Sodium alginate	
b) Magnesium alginate	
C) Agar agar	
× Incorrect 0/1 Points	0 /1 pt Auto-graded
21. 16 is used for teeth mold making *	
a) Sodium 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		
() Sodium sulphate		
✓ Correct 1/1 Points		1 /1 pt
23. 18. Agar is extracted from *		Auto-graded
(ii) a) Red algae 🗸		
b) Green algae		
C) Brown algae		
() 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
25. 20. Cultivation period of Kappaphycus sp on raft will last for	r days *	Auto-graded
() a) 55		
(a) b) 45 ✓		
. ○ c) 65		
() d) 35		

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	× Incorrect 0/1 Points	0 /1 pt
2	6. 21. Carrageenan is widely used in	0 /1 pt Auto-graded
	(i) a) Cosmetics	
	○ b) Ice cream ✓	
	O Q Yoghurt	
	(d) lipsticks	
	✓ Correct 1/1 Points	1 /1 pt
2	7. 22. Agar food grade material should posses the following mandate certificate to be sold in India	Auto-graded
	(a) ISO	
	(iii) b) FSSAI 🗸	
	(c) Halal	,
	O d) GMP	
	× Incorrect 0/1 Points	0 /1 pt
2	8. 23. Green seaweeds are rich in *	Auto-graded
	a) Carbohydrate	
	(b) Protein V	
	C) Lipids	
	() Vitamins	
	× Incorrect 0/1 Points	0 / 1 pt Auto-graded
2	9. 24. Blue green algae is also termed us *	
	(ii) a) Hematococcus	
	○ b) Spirulina ✓	
	() Azolla	
	() d) Ulva	

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✓ Correct. 1/1 Points

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

- (a) Color
- b) Gel strength
- O c) flavor
- () d) Bleaching percentage

Dr.K. Cutha Dr. S. Kantlikuman Dr. R. Shyan Kauman

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	/Opts
	22UBT009]	
3.	. Register No *	Score	/0 pts
	920422214023		
4.	. Class *	Score	/ 0 pts
	II-BT		
5.	. Date *	Scare	/ 0 pts
	2/19/2024		

 $25 \times 1 = 25 \text{ Marks}$

Answer all questions

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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	
(iii) Ulva sp 🗸	
✓ Correct 1/1 Points	1 /1 pt Auto-graded
7. 2. Extraction temperature of agar agar °C ^	,
(ii) a) 100 – 110 🗸	
(b) 60-70	
○ < 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	
(i) 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
11. 6. Carrageenan was extracted from *	Auto-graded
a) Ulva sp	
C) Gelidium sp	
(d) Sargassam sp	
✓ Correct 1/1 Points	1 /1 pt Auto-graded
12. 7. Spot the cultivable red algae *	
() B) Gelidium sp	
⑥ 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	
() Grand seaweed	
() d) Itc seaweed	

Correct 1/1 Points	1 /1 pt
14. 9. Alginate recovery from brown algae extracted solution is done by *	Auto-graded
(a) Alkali precipitation	
C) Centrifugal force	
() Freeze thawing	
✓ Correct 1/1 Points	
15. 10. E406 was assigned to ^	1 /1 pt Auto-graded
a) Sodium alginate	
b) Agar ager	
C) Caragennan	
() Alginic acid	
× Incorrect 0/1 Points	P
	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	
17. 12. Product to be sold among Islamic people should hold *	1 / 1 pt Auto-graded
a) Kosher certificate	
b) ISO certificate	
c) Fssai certificate	
d) Halal certificate	

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✓ Correct 1/1 Point	is .	1 /1,
18. 13. Jews prefer	certified products *	Auto-graded
a) Kosher		
O b) BRC		
C) Halal		
O d) Iso		
✓ Correct 1/1 Points	5	1 /1 pt
19. 14. Alginates are extr	racted from *	Auto-graded
a) Brown seaweed	✓	
b) Red seaweed		
c) Green seaweed		
d) Micro algae		
X Incorrect 0/1 Point	ts	0 /1 pt Auto-graded
20. 15. Cough syrup susp	pension consist of as an emulsifier *	
a) Sodium alginate		
b) Magnesium algin	ate	
C) Agar agar		
) d) Alginic acid 🗸		
X Incorrect 0/1 Point		0 / 1 pt Auto-graded
21. 16 is used for	or teeth mold making *	
a) Sodium alginate		
b) Magnesium algina	ate 🗸	
c) Potassium alginate	e	
d) Calcium alginate		

	Correct 1/1 Paints	
22,	17. Alkali used in alginate extraction is *	1 / 1 pt Auto-graded
	(a) Sothum carbonate /	
	○ b) Sodium bicarbonate	
	○ 6 Sedlum hydraxide	
() d) Sodium sulphate	
4	Correct 1/1 Points	
23. 1	8. Agar is extracted from *	1 /1 pt Auto-graded
(a) Red algae 🗸	
. (b) Green algae	
(C) Brown algae	
(d) Sea grass	
V	Carrect 1/1 Points	1 /1 pt
24. 1	9. On raft cultivation distance between two seedling rope should be*	Auto-graded
	a) 6 inches 🗸	
(b) 12 inches	
(C) Sinches	
. (d) 24 inches	
	Correct 1/1 Points	1 /1pt
25. 20	D. Cultivation period of Kappaphycus sp on raft will last for days *	Auto-graded
(a) 55	
(b) 45 🗸	
, () d65	
) d) 35	

X Incorrect 0/1 Points	0 / 1 pt Auto-graded
26. 21. Carrageenan is widely used in *	1
a) Cosmetics	
○ b) Ice cream ✓	
(i) Yoghurt	
(d) lipsticks	
X Incorrect 0/1 Points	0 /1 pt
27. 22. Agar food grade material should posses the following mandate certificate to be sold in India	Auto-graded
* Commente to be sold in mode	
a) ISO	
○ b) FSSAI ✓	
C) Halal	
O d) GMP	
✓ Correct 1/1 Points	1 /1 pt Auto-graded
28. 23. Green seaweeds are rich in *	-
a) Carbohydrate	
(iii) 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	
(i) b) Spirulina ✓	
C) Azolla	
d) Ulva	

	Correct 1/1 Points		1 /1 pt Auto-graded
30. 2	5. Commercial grades of agar is diversified on the base of *		
	a) Color		
(b) Gel strength 🗸		
	c) Flavor		
1	d) Bleaching percentage		

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I fly Dr. R. Shyan Kuna Dr. R. Shyan Kuna

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Respondent

25

PARKAVI NANTHINI.S

25:25

Time to complete

20/25

Points

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

1. Name *	Score / 0 p
Parkavi Nanthini.S	
2. Roll No *	Score /0 pt
22ubt011	
3. Register No *	Score / 0 pt
920422214020	
4. Class *	Score / 0 pts
II BT	
5. Date *	Score / 0 pts
2/19/2024	<u> </u>

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25 x 1 = 25 Marks

Answer all questions

✓ Correct 1/1 Points	1 /1; Auto-graded
6. 1. Spot the green marine algae *	
a) Sargassam sp	
b) Gracillaria sp	
c) Turbeneria sp	
(a) 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	
✓ Carrect 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	
() Acid precipitation	
✓ Correct 1/1 Points	1 /1 pt Auto-graded
9. 4. Central nodal institute working on algal research *	
(a) CMFRI	
→ b) CFTRI	
(i) CSMCRI 🗸	
O d) CECRI	

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X Incorrect 0/1 Points	0
10. 5. Model agar and carrageenan extraction unit at Mandapam, Tamil Nadu was governed under *	0 / 1 p Auto-graded
a) State agriculture department	
b) State fisheries department 🗸	
c) State coastal department	
d) State gulf of mannar development department	
✓ Correct 1/1 Points	
11.6. Сочинальный да	1 / 1 pt Auto-graded
11. 6. Carrageenan was extracted from *	
a) Ulva sp	
(i) b) Kappaphycus sp ✓	
c) Gelidium sp	
() d) Sargassam sp	
X Incorrect 0/1 Points	0 /1 pt Auto-graded
12. 7. Spot the cultivable red algae *	y deta
() A) Sargassam sp	
B) Gelidium sp	
C) Kappaphycus sp 🗸	
(i) 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
14. 9. Alginate recovery from brown algae extracted solution is done by *	Auto-graded
a) Alkali precipitation	
(i) b) Acid precipitation ✓	
C) Centrifugal force	
() Freeze thawing	
✓ Correct 1/1 Points	1 /1 pt
15. 10. E406 was assigned to ^	Auto-graded
a) Sodium alginate	
(i) 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	
(d) Acidifier	
✓ Correct 1/1 Points	/ 1 pt Auto-graded
17. 12. Product to be sold among Islamic people should hold *	Auto-graded
(a) Kosher certificate	
(b) ISO certificate	
C) Fssai certificate	
(iii) Halal certificate 🗸	
The state of the s	

Correct 1/1 Points	1 /1
18. 13. Jews prefer certified products *	Auto-graded
(iii) a) Kosher 🗸	
(b) BRC	
C) Halal	
O d) Iso	
✓ Correct 1/1 Points	1 /1pt
19. 14. Alginates are extracted from *	Auto-graded
a) Brown seaweed	
(b) Red seaweed	
C) Green seaweed	
() Micro algae	
✓ Carrect 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	
X 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	
() Calcium alginate	

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✓ 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	
() 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 ✓	
(a) 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	
(a) 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	
O) GIVIP	
X Incorrect 0/1 Points	0 /1 pt
28. 23. Green seaweeds are rich in *	Auto-graded
a) Carbohydrate	
b) Protein 🗸	
(i) c) Lipids	
d) Vitamins	
✓ Correct 1/1 Points	l / 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 pt Auto-graded

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

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

White Dr. S. Kartlikuman Dr. R. Shyan Kuman

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

41 Responses

19.8 Average Store

Active some

1 Flame (C point)

41

Responses

Latest Responses

"I Nambeeswort"

"Vishnu Vandhan R M"

"R Shibi James Raja"

3 respondents (7%) answered R for this question

B Manoj harish - BR Akshaya - Balaji R - JVaishnavi Rishikaa

J Nambeeswari Swetha S

R R G S Vibhu JSaron Merline Parkavi NanthiniS

Abinanthan K

Purushoth

PUGAZHENTHI R

2. Roll No (0 point)

41

Responses

Latest Responses

"22ubt007"

"22ubt021"

22/18/7003

2 respondings (\$%) answered 22ubt016 for this question

22ubt014 22ubt032 22ubt031

22UBT038 22ubt004

22U8T027 22ubt036 22ubt016

22ubt005 22UBT008

22UBT006 22ubt041

22UBT018 22UBT039 22UBT034 22UBT024 22UBT040

22ubt035 22UBT026 22ubt011

3. Register No (0 point)

41 Responses Latest Responses 920422214017 920422214041* 920422214033*

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

920422214018 920422214002 920422214023 920422214034 920422214006 920422214008 920422214029 920422214028 920422214014 920422214035 920422214022 920422214027 920422214040 920422214010 920422214001 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 BT

2nd year

Technology year Biotech year biotechnology

II BT Biotechnology - II

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.

@ aj Sargassam sp in Cracking to @ offurbeneralsp

(i) Ulva sp

- 2. Extraction temperature of agar agar _____ °C (1 point)
 61% of respondents (25 of 41) answered this question correctly.
- a) 100 110
- 25
- (D) 60-70
- . .
- () 70-80 () 130-140



- 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



- 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
 d) CECRI
- 1
- 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
- Ci State coastal department
- d) State gulf of mannar develop... 12



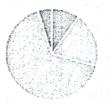
- 6. Carrageenan was extracted from (1 point)
 78% of respondents (32 of 41) answered this question correctly.
 - a) Ulva sp
- 2
- b) Kappaphyous sp
- 32 -
- 🏮 c) Gelidium sp
- 32 V
- (d) Sargassam sp

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

0	A) Sargassam sp	4	
0	B) Gelidium sp	8	
-			

C) Kappaphycus sp

D) Ulva sp



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 b) Aquaagri seaweed C) Grand seaweed

d) lic seaweed



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

0

 a) Alkali precipitation b) Acid precipitation

(i) Centrifugal force

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 b) Agar agar

C) Caragennan 3

(d) Alginic acid



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

6 b) Colorant

() Emulsiber

(a) Aciditier



17.	12	Product	to be	sold	among	Islamic	people	should	hold	(T	point)
	100	of respon	dunts (79 cd.	\$11 across	winged thus	duestic	n consult	Au .		

- a) Kosher certificate
- in 150 certificate
- Ci Fisa certificate
- O di Halid certificate 39 W



18. 13. Jews prefer ____ certified products (1 point) 83% of respondents (34 of 41) answered this question correctly

- at Kosher
- @ to sic
- O child
- 😝 di tro



19. 14. Alginates are extracted from (1 point) 88% of respondents (36 of 41) answered this question correctly.

- at Brown seasoned
- (b) find somered
- (i) Greek seaward
- th More algae



20. 15. Cough syrup suspension consist of _____as an emulsifier (1 point) 22% of respondents (9 of 41) answered this question correctly

- (a) Sodium algmeia
- td Magnesium alginore
- D CLAGO ADV
- (in Alginia acid



21. 16 _____ is used for teeth mold making (1 point) 10% of respondents (4 of 41) answered this quantion correctly

- 10 at Society Algorith
- th) Magnerikim skyriate
- D d Potensian algorite
- (b) Cakrism algenate



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

_		24	.,
10	a) Sodium carbonate	24	
0	b) Sodium bicarbonate	6	
0	c) Sodium hydroxide	17	ì.
63	d) Sodium sulphate	0	



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

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



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

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



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





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

0	a) Cosmetics	10	
0	b) Ice cream	19 ~	/
0	c) Yoghurt	11	
0	d) lipsticks		



Microsoft Forms

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

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

- a) ISO
- b) FSSAI Q Halal
- O d) GMP



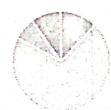
- 28. 23. Green seaweeds are rich in (1 point) 32% of respondents (13 of 41) answered this question correctly.
 - a) Carbohydrate
- 18
- (b) Protein
- 13
- () Lipids
- d) Vitamins



- 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
- c) Azolla
- (d) Ulva



- 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
- b) Gel strength
- a ci flavor
- d) Bleaching percentage





Industry Certified Value Added Programme

ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

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

INTERNAL MARK STATEMENT

S.No.	Reg Number	Roll Number	Student Name	Product Making	PPT Presenta tion	Product Demonstrat ion	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

on

ALGAL TECHNOLOGY AND APPLICATIONS

5th to 8th and 12th February 2024

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

INTERNAL MARK STATEMENT

S.No.	Reg Number	Roll Number	Student Name	Product Making	PPT Presenta tion	Product Demonstrat ion	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

Dr R.Shyam Kumar



(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
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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





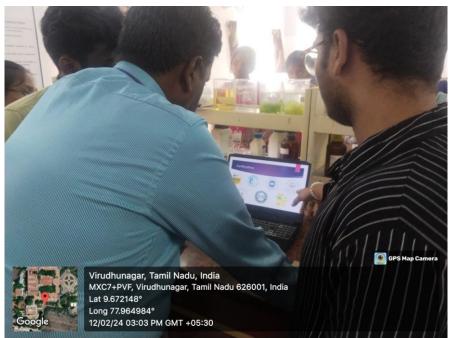




Preparation of Algal based Products

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

Dr R.Shyam Kumar



(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
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Industry Certified Value Added Programme

οn

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	Exte	rnal 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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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		%	
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			

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

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
			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



Certificate: Member In TBI-ABIS (TNAU). Certificate by TNV, ISO 9001 Series and 100% Organic.

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- info@akseaweeds.com
- www.akseaweeds.com



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







Certificate: Member in TBI-ABIS (TNAU).
Certificate by TNV, ISO 9001 Series and 100% Organic.

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Industry Certified Value Added Programme

Own

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
	1,000,000		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	BALAJIR	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	50	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	1
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	1
22	920422214022	22UBT039	PRAKITHA S	40	46	86	2
23.	920422214023	22UBT009	PRIYADHARSHINI L	40	48	88	2
24	920422214024	22UBT027	PUGAZHENTHER	40	46	86	1
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	920422214010	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	SUMATHES.	40	46	86	2
36	920422214036	22UBT041	SURUTHEN	40	48	58	2
37.	920422214037	22UBT031	SWETHA S	40	46	86	2



Industry Certified Value Added Programme

ALGAL TECHNOLOGY AND APPLICATIONS

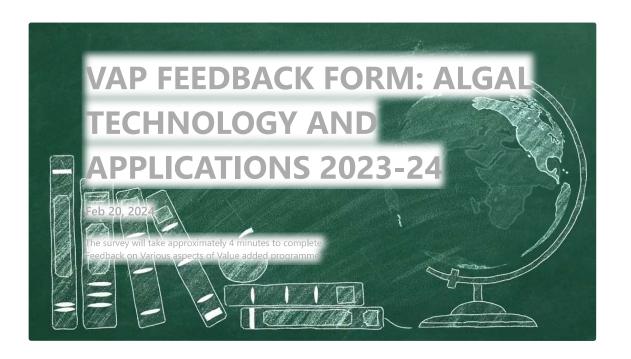
5th to 8th and 12th February 2024

	Department:	Biotechnology	Arto and own Assertation and	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

Dr K.Geetha.

Dr R.Shyam Kumar

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 ar	n insight to	o apply th	ie knowledge	gained for	development o	f
	a sm	all 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. *
	This content is neither created nor endorsed by Microsoft. The data you submit will be sent to the form owner. Microsoft Forms

Programme Coordinators

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

Dr R.Shyam Kumar

VAP FFFDBACK FORM: ALGAL TECHNOLOGY AND **APPLICATIONS 2023-24**

04:35 Closed 40

Responses Average time to complete Status

1. Roll Number

40

Responses

Latest Responses

"22UBT040 "

"22ubt029"

"22ubt042"

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

22ubt007 22UBT039

22ubt011

22ubt005 22ubt021

22UBT024

22ubt032 22ubt018

22ubt016 22UBT014

22UBT015 22ubt035

22ubt031 22UBT026

22UBT034

22ubt001 22ubt041 22ubt036

2. Register Number

40

Responses

Latest Responses

"920422214018"

"9204222140"

"920422214012"

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

9200422214013 920422214019 920422214004 920422214029

> 920422214021 920422214001 920422214022 920422214040

> > 920422214020 920422214015 920422214028

920422214017 920422214025 920422214038 920422214011

> 920422214027 920422214005 920422214009 920422214023

> > 920422214016

3. Name

Latest Responses

40

Responses

"Sharmila R"
"N.keerthana"

JVaishnavi Rishikaa

MSSakthi shyamala Swetha S
ABINANTHAN K
B Manoj Harish Vishnu Vardhan

Sankarapandian P R Pugazhenthi N GENGESWARI

JSaron Merline

Gowri S
R
Balaji R J Nambeeswari
Sharmila R BR AKSHAYA
GSelva Murugan

4. Date

Latest Responses

40

Responses

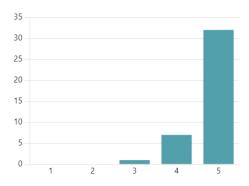
"2024-02-12"

"2024-02-12"

"2024-02-12"

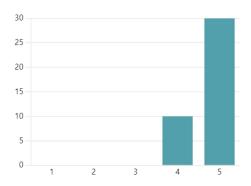
5. 1. The programme provided an insight to apply the knowledge gained for development of a small scale industry.

4.78 Average Rating



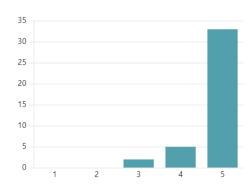
6. 2. The programme provided an insight to identify and analyze simple solutions for industrial applications

4.75 Average Rating



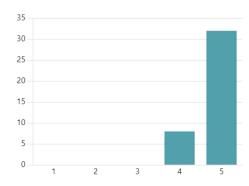
7. 3. The programme provided an insight to design solutions for environmental problems

4.78
Average Rating



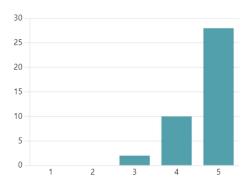
8. 4. The programme provided an insight to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data in various entrepreneurial ventures

4.80 Average Rating



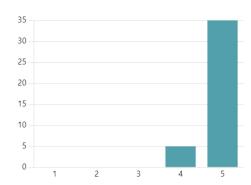
9. 5. The programme provided an insight to create, select, and apply appropriate techniques, resources, and modern engineering tools and software

4.65 Average Rating



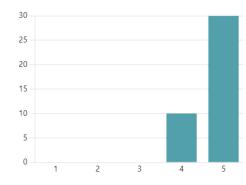
10. 6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings

4.88 Average Rating



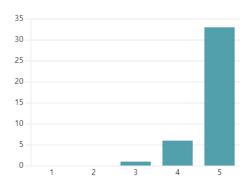
11. 7. The programme provided an insight to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

4.75 Average Rating



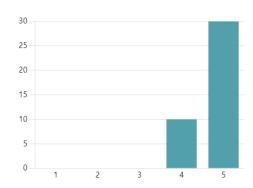
12. 8. Rate the course module and content of the Value added programme.

4.80 Average Rating



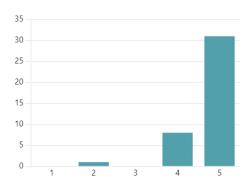
13. 9. Rate the infrastructure facilities provided to conduct the programme.

4.75 Average Rating



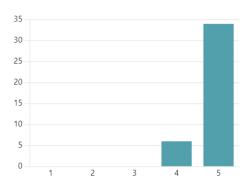
14. 10. The allotted time to complete the task given during the programme was sufficient

4.72 Average Rating



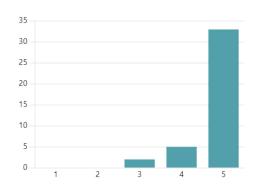
15. 11. Rate the Theory sessions handled for **ALGAL TECHNOLOGY AND APPLICATIONS**

4.85 Average Rating



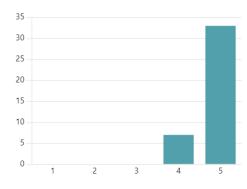
 16. 12. Rate the basic Hands-on sessions handled for ALGAL TECHNOLOGY AND APPLICATIONS by Internal Resources.

> 4.78 Average Rating



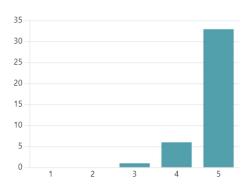
17. 13. Rate the Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry

4.83 Average Rating



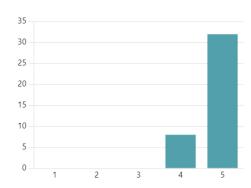
18. 14. Rate the Industrial training on Value addition and Commerce from Seaweeds.

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.

addition to the product seaweed productsultivation and seaweed agar extraction

Industrial visit agar Product algae employability skills

things about seaweed

Growth of algae helps algal technology knowledg@gar product training & product products and industries excellent and product

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.

Time & Tracustomers Skill service Days of the classes service lab session Timelgal technology of tracustomers Skill Days can be improved Days different day practical by visited day Field visit industrial skill industrial skill

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.

duration of VALUE facilities Duration of hands
State goals
invited from outsideration days

excellent sectioneek days and hours
business knowledge resource persotheoretical input

Programme Coordinators

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

Dr R.Shyam Kumar

00:06

Time to complete

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01004	1620	LS

Respondent

40

Anonymous

1. Roll Number *			
27UBT040			
2. Register Number *			
920422214018			
3. Name *			
Nancy G			
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4. Date *			
2/12/2024			0

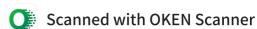
Feedback on General aspects of Value Added Programme

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

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

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

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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."

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

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

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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. "

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Feedback on Sessions

Give fair feedback on each session.

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

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

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

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

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

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15. 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. *

Duration of the program

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

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Dynamon of hareh on in field

Or 16 author Dr. 5. Kentikuna De R. Shyam Kaman

Respondent	04:04
8 Anonymous	Time to complete
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Name *	
M.Helen Gracelin Joy	
Date *	
2/12/2024	

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

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

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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 "

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

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

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.

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Feedback on Sessions

Give fair feedback on each session

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

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

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

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

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

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

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

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

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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

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Respondent	
1 Anonymous	01:27 Time to complete
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920422214015	
Name *	
Mohamed Aasim M	and the second s
Date *	
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Feedback on General aspects of Value Added Pro	gramme
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The programme provided an insight to identify and analyze sin	mple solutions for industrial applications

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

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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."

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

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

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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.

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Feedback on Sessions

Give fair feedback on each session.

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

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

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

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

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

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18. 14	1. Ra	te the	Indi	ustria l	I training on Value addition and Commerce from Seaweeds. *
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10 15		!! !			로 보면 생각하는 것이 되었다. 그런 보이 되었다. 이렇게 되었다는 것이 되었다. 그런 그런 그런 것이 되었다. 2005년 1일 전 100명 전 1
15. 13	i. Ovi	erallı	now i	will yo	ou rate the Value added programme. *
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	Su	gge	stio	ns fo	or Improvement
20. 16.	. Wri	te an	y two	best	t features of the Value added programme. *
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1. 17.	Wri	te an	v two	ı featı	sures that can be improved in the Value added programme. *
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2. 18.	Plea	se gi	ve yo	our va	aluable suggestions for the improvement of the programme. *
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Tor K-hulha Dr S. Karthikuman Dd R. Shyam Keuman

View results	
Respondent 20 Anonymous	04:09 Time to complete
1. Roll Number * 2Nds022	
2. Register Number * 920422214016	
3. Name *	
4. Date *	
Feedback on General aspects of Value 5. 1. The programme provided an insight to apply	the knowledge gained for development of a small scale industry.
章章章章章 6. 2. The programme provided an insight to identif	fy and analyze simple solutions for industrial applications - *

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

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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 *

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

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

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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. *

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Feedback on Sessions

Give fair feedback on each session.

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

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

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

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

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

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77. 13. 110.	te the Industrial visit to Fisheries Department at Ramanathapuram and AK Seaweeds Industry *	
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18, 14. Rat	te the Industrial training on Value addition and Commerce from Seaweeds.*	
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19. 15. Ove	erall how will you rate the Value added programme. *	
索索	★ ★ ☆	
Sug	ggestions for Improvement	
20. 16. Write	e any two best features of the Value added programme. *	
How to s	start company and Entrepreneurship	as to choose
21. 17. Write	e any two features that can be improved in the Value added programme. *	
22. 18. Pleas	e give your valuable suggestions for the improvement of the programme. *	
Dr	Khulha Dr S. Karstikewan Dr R. Shyankuman	

	Respondent 33 Anonymous	08:51 Time to complete
Roll Number *		
22ubt030		
Register Number *		
920422214030		
Name *		
G.Selva Murugan		
Date *		
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	eneral aspects of Value Added Pro	ogramme

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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 *

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 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."

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

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

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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. *

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Feedback on Sessions

Give fair feedback on each session.

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

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

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

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

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16, 12. Rate the basic friends-on sessions handled for ALGAL TECHNOLOGY AND APPLICATIONS by Internal Resources, 1

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1/	13.	Rate the industria	ai visit to risheri	es Department a	it Kamanathapuram	and MK Seaweeds industr	y
		Treated them are an arranged					

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

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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

My K. Culha Dr. S. Karthi kuman Dr. R. Shyam Kaman

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**" organized by Department was 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 handson 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



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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. F	Ceetha & Dr.R.Shyam Kut	mar		(2)
S.No.	Particulars .	Place	Bill No	Date	Amount (Rs.
1	1 week Training fees on Algal Souweeds	Ramerathep	23-24/0272	22/02/2024	53300
				TOTAL	53300

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

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Account details of Resource persons:

Amount to be transferred

Rts. 53,300/-

Mr. R.P.Rajadurai Jesudoss, Manager, AK Seaweeds,

Ramnadapuram, Tamil Nedu.

E Mail: jesuramnad@gmail.com, Ph: +919944390334

Bank Name: Tamilinad Mercantile Bank Ltd

A/C No. 131100050311343 Branch: Ramanathapuram IFSC Code: TMBL0000131

Programme Coordinators

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

 $T_{J,C_{\alpha}}$,

HoD / BT Dr R.Shyam Kumar

Tax Invoice

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

	HSN/SAC	Quantity	Rate	per	Disc %	Amount
1 week Training on Algae Seaweed		41.00 (Person)	1300.00			63,300.00
	otal					₹ 53,300.00
		Total	Total	Total	Total	Total

INR Fifty Three Thousand Three Hundred Only

We declare that this invoice shows the actual price of the goods

HSN/SAC Taxable Value 53,300.00 Total 53,300.00

Tax Amount (in words) : NIL

Resource person: R.P. Rajadurai jesudoss

Bank Details : R.P. Rajadurai Jesudoss

Bank Name : TMB

A/o No. : 131100050311343 Branch & IFS Code : Ramanathapuram

&TMBL0000131

described and that all particulars are true and correct.

This is a Computer Generated Invoice

Declaration

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Tax Invoice

Ak Seaweeds			roice No.	Dated					
13/1A 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			23-24/0272			22-Feb-2024			
			livery Note	Mode/Terms of Payment					
			Supplier's Ref.			Other Reference(s)			
			yer's Order N	Dated					
Kamaraj College of Engineering and Technology Virudhunagar			spatch Docur	Delivery Note Date					
State Name Tamil Nadu, Code: 33		De	spatched thro	Destination					
	Te	rms of Deliver			7				
Buyer (if other than consignee) Kamaraj College of Engineering and Techno Virudhunagar. State Name : Tamil Nadu, Code : 33	ology								
		SN/SAC	Quantity	Rate	per	Disc. %	- 1	Amount	
SI Description of Goods	Π,	514/5AC	Quantity	Tale	P0.				
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								Value 53,300.00	
Resource person : R.P. Rajadurai jesudoss						T	otal	53,300.00	
ax Amount (in words) : NIL		Bank	Details Name	: R.P. Raj: : TMB : 131100			ss	WEGA	
eclaration		A/c N Brand	o. ch & IFS Cod		athap	ouram 🛴	for A	o Seaweed	
Ve declare that this invoice shows the actual price of	f the good	S					12	1.70	