

## DEPARTMENT OF BIOTECHNOLOGY

Industry Certified Value Added

Programme

On

# MUSHROOM CULTIVATION AND VERMICOMPOSTING

05/01/2023 to 10/01/2023

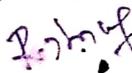
Dr K.Geetha, ASP/BT



Dr S.Karthikumar, ASP/BT



Dr R.Shyam Kumar, Prof/BT



Dr R.Shyam Kumar



VAP Coordinators

HoD/BT

# KAMARAJ

COLLEGE OF ENGINEERING & TECHNOLOGY

S.P.G.Chidambara Nadar - C. Nagammal Campus,  
S.P.G.C. Nagar, K. Vellakulam - 625 701, Near VIRUDHUNAGAR, Madurai District.  
Accredited by NAAC with 'A' Grade



Submitted to the SECRETARY for approval through the PRINCIPAL

Book No.

BIOTECH

SL No. 58

Date 21/9/2022

Approval for Value Added programme for II BT  
(2021-23)

Approval may please be given to conduct Value added programme on "Musroom cultivation & Vermicomposting" from 8<sup>th</sup> to 10<sup>th</sup> Jan (5 days) for II B.Tech BT students as an Industry certified program.

The proposal and budget is attached for your verification. Budget is Rs 25,520/- . We will require College bus facility on 1 day till Kulloorandi and snacks, tea & lunch for 5 resource persons on 2 days. Kindly give us the permission to conduct the same.

1. K. Gauthi
2. ~~...~~
3. ~~...~~

Signature of Faculty

*[Signature]*  
HOD

*[Signature]*  
23/9/22  
PRINCIPAL

### OFFICE USE

1) Budget allotted

: Value Added Course Expenses

2) Amount committed / Spent sofar

:

3) Balance available

:

OM

Treasurer

Secretary

*[Signature]*

**Kamaraj College of Engineering & Technology 2019-20**  
**MUSHROOM CULTIVATION COURSE EXPENSES-BT DEPT**  
 Ledger Account

1-Apr-2019 to 31-Mar-2020

Page 1  
Credit

Date	Particulars	Vch Type	Vch No.	Debit	Credit
14-12-2019	Cr <b>GEETHA.K / BT SUSPENSE</b> <i>To being BT dept Entrepreneurship, biofertilizer production value added programme printing, refreshment charges paid on 19,21.11.19</i>	Journal	3122	34,451.00	
31-3-2020	Dr <b>MUSHROOM CULTIVATION PROGRAMME FEES (BT)</b> <i>By being expenses amount transfer to Mushroom cultivation course fees -BT dept a/c</i>	Adjustment	937		34,451.00
				34,451.00	34,451.00

## DEPARTMENT OF BIOTECHNOLOGY

### Industry Certified Value Added Programme

On

## MUSHROOM CULTIVATION AND VERMICOMPOSTING

#### Objective:

- To give an insight on Entrepreneurship to the students
- To provide hands on training in Biofertilizer production and Mushroom cultivation so that students will be able to learn the basic aspects of Mushroom cultivation and vermi-composting.

#### Need for the Value Added Program:

- "Mushroom" 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 Mushroom based product development. Vermicomposting will teach them how to start a Biofertilizer unit.

#### Target Participants:

Class: **II B.Tech. Biotechnology (2021-25 Batch)**

No. of students: 47

**Duration:** 5 Days

**Tentative Dates:** 5<sup>th</sup> to 10<sup>th</sup> Jan 2023 (Except 8/1/2023-Sunday)

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

#### Expected Outcome:

- The students will learn the necessary skills and knowledge for the cultivation of Mushroom and mushroom based product development and production of Biofertilizer (Vermicompost).
- This workshop also aims to motivate the students to take up Entrepreneurship as career prospective in future.

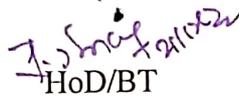
### PROGRAM SCHEDULE

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Day 1	Inaugural Function	Introduction to Vermicomposting	Design, Layout and Preparation
Day 2	Vermicomposting Technology: Visit to Vermi Compost Farm at JP Sustainable Foundation, Kulloorsandai, Virudhunagar		
Day 3	Application of vermicompost and vermiwash for plant growth study	Introduction to Mushroom cultivation-design & layout	
Day 4	Cultivation of Mushroom: Sterilization of straw for Bed Preparation (Hands-on training by External Expert)	Spawn preparation and seeding (Hands-on training by External Expert)	
Day 5	Mushroom Bed preparation, Maintenance and Harvesting Techniques (Hands-on training by External Expert)		Valedictory Function

## BUDGET

Sl.No	Category	Particulars	Price (Rs.)	Total (Rs.)
1	Mushroom Cultivation	Materials required (Rice Straw, Bag, Seeds, Medicine, etc.)	5,420	10,420
2		Raw materials Transportation Charge	3,000	
3		Remuneration to External Resource Person	2,000	
4	Vermicomposting	Training Fee to External Resource Person	5,000	7,400
5		Transportation to Kullorsandai by College Bus (~20 km from College) (Rs 50/Head)	2,400	
6	General	Workshop Kit (File, Note Pad, Pen) Rs.120x50	6,000	6,000
7		Lunch & Snacks to Resource Persons (5 Members)	700	700
8	Miscellaneous	Overhead charges	1,000	1,000
<b>TOTAL</b>				<b>25,520/-</b>
Cost Per Student: <del>Rs.543/47</del> = Rs. <u>25,520/-</u> <span style="margin-left: 150px;">47</span>				

  
 Programme Co-ordinators

  
 HoD/BT

  
 Principal

✓

24.12.2019 → Rs. 34,451/-

**DEPARTMENT OF BIOTECHNOLOGY**  
**Industry Certified Value Added Programme**  
**On**  
**MUSHROOM CULTIVATION AND VERMICOMPOSTING**

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<b>TOTAL</b>				<b>25,520/-</b>
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*K. Srinivas*  
*P. Srinivas*  
 Programme Co-ordinators

*J. Srinivas*  
 HoD/BT

*Srinivas*  
 Principal

GST : 33AEPV28682127  
TIN : 33920354783  
SSI : 3302411-38288E  
FSSAI: 22415570000153

fssai



R.VIJAYAKUMAR  
9842815125

3/162-A1, Aathiparasakthi Nagar 3rd Cross Street, Thiruppalai Main Road, Madurai - 625014.

Date : 19.12.2022

To  
Geetha Madam  
Kamaraj Engg College  
Virudhunagar

Straw Bundles - 5 Nos - 1500.00  
Medicine - 5 Ltrs - 250.00  
Powder - .5 kg - 400.00  
Seeds - 20 kg - 3000.00  
Bed Cover - 1 kg - 200.00  
Rubber Band - 1 pkt - 70.00

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5420.00  
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Transport Extra...etc

for V - Care Agro Tech

R. Vijayakumar

( Proprietor)

Note: Mushroom Cultivation Training, Mushroom Shed Construction Work,  
Mushroom Value Addition, Mushroom Marketing Support, Mushroom Production Follow up.

### Resource Person Details

**Name of Programme** : Industry Certified Value Added Programme on "MUSHROOM CULTIVATION AND VERMICOMPOSTING" from 5<sup>th</sup> to 10<sup>th</sup> Jan 2023

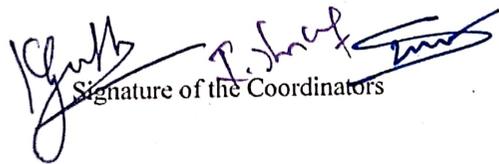
**Name of Coordinator** : Dr.K.Geetha, Dr S.Karthikumar & Dr R.Shyam Kumar

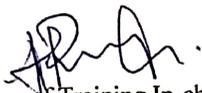
**1. To develop tools for deciding the resource persons for the value added programs**

S. No.	Class	Training Programme Planned	Offered by Department / TDP Cell	Industry / Institute Associated with, if any	Details of Internal Resources			Details of External Resource Persons		
					Name & official address, Email Id, Ph. No.	Expertise (Teaching, Research, Industry, Others, if any)	Expertise with respect to domain area / title of the programme	Name & official address, Email Id, Ph. No.	Expertise (Teaching, Research, Industry, Others, if any)	Expertise with respect to domain area / title of the programme
1	II B.Tech	Mushroom Cultivation training	Biotechnology Department	V Care AgroTech Mushroom Farm, Madurai,	-	-	-	Mr R.Vijayakumar, Vcare Agro Tech Mushroom Farm, Mushroom Cultivation training centre, 3/162-A1, Aathiparasakthi Nagar, Illrd Cross Street, Thiruppalai Main Road, Madurai-	Has 7 years of training experience and is also the	Has 7 years of training experience

	Biotechnology		Biotechnology Department					14 E.Mail: <a href="mailto:vtech.vijavakumar@gmail.com">vtech.vijavakumar@gmail.com</a> Ph: +91 9842815125	owner of the Industry who founded it based on his knowledge in this area	
2		Vermicompost production training		S.S.Vermicompost Industry, Vadipatti, Madurai	-	-	-	Mr. PALANEESWAR RAJARATHINAM, Jeypee Biotech, 2/527-2, East Street, Kullursandai Arupukottai Taluk, Kullursandai, Tamil Nadu 626004.  Ph:+91 94431 42328  E.mail: <a href="mailto:jeypeebio@jeypeefarm.com">jeypeebio@jeypeefarm.com</a> , <a href="mailto:jeypeebio@gmail.com">jeypeebio@gmail.com</a>  Website: <a href="https://www.jeypeefarm.com/services.html">https://www.jeypeefarm.com/services.html</a>	The industry was founded in 1992 and the trainer is the entrepreneur who established the industry. Has many years of experience.	Has many years of experience.
3		Applications In various fields		Internal resources Dr R.Shyam Kumar, Prof & Head, Dept of Biotechnology, KCET, VNR E.mail:				-	-	-

		Basic theory of Mushroom cultivation & Vermicomposting			<p><a href="mailto:hodbt@kamarajengg.edu.in">hodbt@kamarajengg.edu.in</a> Ph: +91</p>				
		Entrepreneurs hip development			<p>Dr K.Geetha, Asso. Prof., Dept of Biotechnology, KCET, VNR E.mail: <a href="mailto:geethabt@kamarajengg.edu.in">geethabt@kamarajengg.edu.in</a> Ph: +91 9443116930</p>	<p>Dr S.Karthikumar, Asst. Prof., Dept of Biotechnology, KCET, VNR E.mail: <a href="mailto:karthikumar@kamarajengg.edu.in">karthikumar@kamarajengg.edu.in</a> Ph: +91 9944 215859</p>	<p>He aspires to be an Entrepreneur. He has been involved in many small activities related to the domain.</p>	<p>He has subject expertise in Bioindustrial Entrepreneur.</p>	

  
Signature of the Coordinators

  
Signature of Training In-charge

  
Signature of Head

**Dept. of Biotech-KCET: Training Program on Vermicomposting - Reg.**

Geetha.K &lt;geethabt@kamarajengg.edu.in&gt;

Wed 1/4/2023 10:21 AM

To: jeypeesustainabilityfoundation@gmail.com &lt;jeypeesustainabilityfoundation@gmail.com&gt;

Cc: Karthikumar.S &lt;karthikumarbt@kamarajengg.edu.in&gt;; HODBT &lt;hodbt@kamarajengg.edu.in&gt;

 1 attachments (192 KB)

II BT Value added - Programme Schedule-2022-23.pdf;

Dear Dr. R. PALANEESWAR,

Greetings!!!!!!!

Department of Biotechnology, Kamaraj College of Engineering and Technology is organizing a Industry certified Value-Added Program on "**MUSHROOM CULTIVATION AND VERMICOMPOSTING**" to 2<sup>nd</sup> Year B.Tech. Biotechnology during **5<sup>th</sup> to 10<sup>th</sup> January 2023**.

In this regard, We are very glad to invite you as a Resource Persons. As per our telephonic conversation, to provide a field exposure and onsite experience of vermicomposting work to our students, a group of 47 students and 2 faculty members will visit to JP Biotech., Kullorsandai on **06/01/23 (Friday), 10.00 am**.

Herewith, I have attached the program schedule for your kind information. Thank You for your kind support and time.

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

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.  
Tamilnadu, India  
Mob: +91 9443116930  
Alt Mail: geetgene@gmail.com

**Dept. of Biotech-KCET: Invitation for Training Program on Mushroom Cultivation - Reg.**

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

Wed 1/4/2023 10:27 AM

To: vtech.vijayakumar@gmail.com <vtech.vijayakumar@gmail.com>

Cc: Karthikumar.S <karthikumarbt@kamarajengg.edu.in>;HODBT <hodbt@kamarajengg.edu.in>

Dear Mr. R.Vijayakumar,

Greetings!!!!!!!

Department of Biotechnology, Kamaraj College of Engineering and Technology is organizing a Industry certified Value-Added Program on "**MUSHROOM CULTIVATION AND VERMICOMPOSTING**" to 2<sup>nd</sup> Year B.Tech. Biotechnology during **5<sup>th</sup> to 10<sup>th</sup> January 2023**.

In this regard, We are very glad to invite you as a Resource Persons. As per our telephonic conversation, to provide a hands-on training and experience of starting a mushroom cultivation farm to our students, we request you to provide training to a group of 47 students on **09/01/23 and 10/01/2023** at our college campus.

Herewith, I have attached the program schedule for your kind information. Thank You for your kind support and time.

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

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.  
Tamilnadu, India  
Mob: +91 9443116930  
Alt Mail: geetgene@gmail.com



(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)  
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S.P.G.C. Nagar, K.Vellakulam - 625 701 (Near VIRUDHUNAGAR).

## DEPARTMENT OF BIOTECHNOLOGY

### CIRCULAR

KAMARAJ / BT / 2022-23 / VAP-II BT / 1910

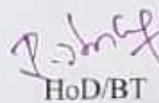
Date: 02.01.2023

The Department of Biotechnology is going to organize an **Industry Certified Value Added Programme** on "MUSHROOM CULTIVATION AND VERMICOMPOSTING" for II year B.Tech Biotechnology students. The 5 days course is scheduled from 5<sup>th</sup> to 10<sup>th</sup> January 2023. The programme schedule for the VAP is given below:

### PROGRAM SCHEDULE

DATE	9.00 am to 10.40 am	11.00am to 12.40pm	1.30 pm to 4.00 pm
05/01/2023	<b>Inaugural Function</b>	Introduction to Vermicomposting	Design, Layout and Preparation
06/01/2023	Vermicomposting Technology: Visit to Vermi Compost Farm at JP Sustainable Foundation, Kulloorsandai, Virudhunagar		
07/01/2023	Application of vermicompost and vermishash for plant growth study	Introduction to Mushroom cultivation-design & layout	
09/01/2023	Cultivation of Mushroom: Sterilization of straw for Bed Preparation (Hands-on training by External Expert)	Spawn preparation and seeding (Hands-on training by External Expert)	
10/01/2023	Mushroom Bed preparation, Maintenance and Harvesting Techniques (Hands-on training by External Expert)		<b>Valedictory Function</b>

  
PROGRAMME COORDINATORS

  
HoD/BT

  
PRINCIPAL

**Copy to:**

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

Course Code	Course Name	L	T	P	C
VAP	Mushroom Cultivation and Vermicomposting				1

**a. Preamble**

This course enables the students to

- Understand the basic concepts, principles, potentials and limitations of mushroom cultivation and vermiculture techniques.
- Apply the active compounds of mushroom for developing a solution for health care problems.
- Develop mushroom cultivation and vermiculture skills for entrepreneurial activity.
- Appreciate the skills / devices / practices associated with the compact procedures of biodegradation of unwanted solid residues

**b. Course Outcomes**

After successful completion of the course,

CO.No.	Course Outcome	Knowledge Level
CO1	The students will be able to apply the active compounds of mushroom in food and pharmaceutical industry.	K3 (Apply)
CO2	The students will be able to implement the cultivation techniques for mushroom production.	K3 (Apply)
CO3	The students will be able to apply post-harvest technology to preserve the quality of the product.	K3 (Apply)
CO4	The students will be able to evaluate the significance of earthworms in increasing the soil fertility.	K4 (Analyze)
CO5	The students will be able to execute the techniques of vermicomposting for large scale production and marketing.	K3 (Apply)

**c. Course Syllabus**

**Total: 30 Hours**

**UNIT I INTRODUCTION TO MUSHROOM CULTIVATION 06**

Introduction to mushroom cultivation- design and layout, spawn preparation, cultivation techniques; Present status of mushroom industry in India; Cultivable edible mushrooms; Food value of edible mushrooms.

**UNIT II CULTIVATION OF MUSHROOM 12**

Hands-on training – Sterilization of straw for bed preparation; Preparation of mushroom cultivation bed; Cultivation of oyster mushroom and white button mushroom; Maintenance of culture bed; Harvesting techniques.

**UNIT III VERMICOMPOSTING TECHNOLOGY 04**

Need for earthworm culture; Scope and importance of vermiculture; Small scale and commercial methods: process & advantages; Vermicomposting equipment - devices, design and maintenance of vermi bed.

**UNIT IV PRODUCTION OF VERMICOMPOST 08**

Hands-on training – Pretreatment of waste for vermicompost bed; Preparation of vermicompost setup; Different methods of Vermicompositing (Heap method, Pot method, and Tray method); Collection and preservation of vermicompost and vermiwash; Application of vermicompost and vermiwash for plant growth study.

**TEXT BOOKS:**

1. Robin Gogoi Yella Rathaiah T R Borah, Mushroom Cultivation Technology, Scientific Publishers, 2006.
2. S.C. Tiwari & Pankaj Kapoor, Mushroom Cultivation, 2018.
3. Clemens NPCB Board of Consultants & Engineers, The Complete Technology Book on Vermiculture and Vermicomposting, 2004
4. Keshav Singh, Textbook of Vermicompost: Vermiwash and Biopesticides, 2014

**REFERENCES:**

1. Sultan Ahmed Ismail, 2005. The Earthworm Book, Second Revised Edition. Other India Press, Goa, India.
2. Vermiculture Technology; Earthworms, Organic Wastes and Environmental Management, 2011, Edited by Clive A Edwards, Norman Q Arancon & Rhonda Sherman, CRC Press
3. [www.organicgrowingwithworms.com.au](http://www.organicgrowingwithworms.com.au)
4. New York Times, Scientists Hope to Cultivate and Immune System for Crops



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

**DEPARTMENT OF BIOTECHNOLOGY**

**MINUTES OF THE 3<sup>rd</sup> ONLINE MEETING**

**BOARD OF STUDIES OF BIOTECHNOLOGY**

**DATE:** 11, Nov, 2021, Thursday

**Time:** 2.00 PM – 3.45 PM

**PLATFORM:** MS-Teams

**Meeting Link:**

[https://teams.microsoft.com/l/meetupjoin/19%3ameeting\\_Mjk1YTQ3MjYtNzZiNS00YjI2LWI2M2MtNWU2MWNiNTZhNTM2%40thread.v2/0?context=%7b%22Tid%22%3a%222666d919-f1f5-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%2253e97dde-b467-45ac-80a2-df98f8017534%22%7d](https://teams.microsoft.com/l/meetupjoin/19%3ameeting_Mjk1YTQ3MjYtNzZiNS00YjI2LWI2M2MtNWU2MWNiNTZhNTM2%40thread.v2/0?context=%7b%22Tid%22%3a%222666d919-f1f5-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%2253e97dde-b467-45ac-80a2-df98f8017534%22%7d)

**IN ATTENDANCE:**

**BoS External members:**

S. No	Name of the Expert	Designation	Capacity
1	Dr. Sukumaran Prabhu	Professor, Department of Biotechnology, Sri Venkateswara College of Engineering, Pennalur, Sriperumpudur tk – 602117	Anna University Nominee
2	Dr. A.Santhyagu	Professor, School of Biotechnology, NIT Calicut, Kerala-673601.	Academic Council nominated BoS Member
3	Dr. N.Ayyadurai	Senior Scientist, Biochemistry & Biotechnology, CSIR-Central Leather Research Institute, Adyar, Chennai – 600 020.	Academic Council nominated BoS Member
4	Dr. K. Rajeshwari	Founder and Managing Director, Bioklone Biotech Private Limited, Plot No.14 and 15, Golden Jubilee Biotech Park, Siruseri, Navalur, Chennai – 603 103, Tamil Nadu.	Industrialist
5	Ms.S.Sivagamasunth	Associate Scientist, Biocon Park, SEZ,	Alumni

ari	BommasandraJigani Link Rd, Phase-IV, Bommasandra Industrial Area, Bengaluru, Karnataka 560099.	
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**BoS Internal members:**

S. No	Name of the Faculty	Designation
1	Dr. R. Shyam Kumar	Chairperson / HoD-BT
2	Dr. S. Mariaamal Raj	UG Programme coordinator
3	Dr. K. Geetha	PG Programme coordinator
4	Dr.S.Karthikumar	Research Programme coordinator
5	Dr. I. Ganesh Moorthy	Associate Professor / BT
6	Mr. S. Manibalan	Assistant Professor / BT
7	Ms.M. Soundaryalakshmi	Assistant Professor / BT
8	Dr. A. Ronaldo Anuf	Assistant Professor / BT
9	Ms. R. Amuthalakshmi	Assistant Professor / BT
10	Dr.D.Pradiba	Assistant Professor / BT

**THE MINUTES:**

The BOS meeting was organized for discussing the amendments in the three member committee for online courses (UG & PG), Value added courses and Industry Internship, approval of the syllabus of value added courses, list of online courses of 2020 regulation and the syllabus of first year common course (Biology for Engineers) in the proposed new regulation 2021.

**DISCUSSIONS:**

- Dr. R. Shyam Kumar, Chairperson of the BOS, delivered the Welcome address.
- Dr. S. Mariaamalraj, UG programme coordinator, presented the amendments and the proposed syllabus to the BoS members.
- The UG programme coordinator conveyed the modification in the exam pattern of the end semester examination from MCQ mode (online) to the descriptive type (physical mode) to the experts and board members.

**Discussion related to 2021 Regulation:**

- The inclusion of the subject "Biology for Engineers" in the first semester of the proposed Regulation 2021 was presented to the experts of board of studies.
- All the experts of the board welcomed the addition of Biology for Engineers in the new regulation R2021.
- Dr.SukumaranPrabhu, the Anna University nominee, suggested to make sure that the addition of new course could be done in the 2020 regulation (V-VIII semester) since the

BoS has already approved syllabus of I – IV semester, as well as in the new regulation 2021 (I-VIII semester).

- During the discussion on Biology for Engineers course syllabus, the Anna university nominee enquired about to highlight a clarity in the topic Science and Engineering in Unit I. The chairperson and the UG programme coordinator explained that the student will be introduced to what is science, engineering and the correlation between them.
- The Anna University nominee, suggested to include the topic application of biology in the first unit. The suggestion was well taken and it was introduced by the subject expert, Dr. K. Geetha.
- The Anna University nominee, enquired about the topic Overview of cellular Transport. The Chairperson replied that the basics of molecular transport in the cell will be covered.
- The Anna University nominee suggested adding Classification and Applications in Unit III. He also requested to add coenzymes along with cofactors in the same unit. The suggestions were well taken and added by the subject expert Dr. K. Geetha.
- Dr Rajeshwari, Industry expert, wanted to know why the syllabus is mainly focusing on Microbiology, especially in Unit IV and V. She also enquired on which organism will be covered in Unit II to study about cell cycle etc. The chairperson and UG programme coordinator clarified that most of the engineering course applications are based on microbes, therefore, more attention is given on microbiological aspects. The PG Coordinator clarified that cell cycle and other related topics will be covered with respect to both prokaryotes and eukaryotes. The explanation was accepted by the industry expert.

**Discussion related to 2020 Regulation:**

- In the value added course “Mushroom Cultivation and Vermicomposting”, Anna university nominee enquired about the syllabus framing process. Dr. K. Geetha, the subject expert, explained that the syllabus was framed with the inputs and suggestions received from the industry with whom the department will be collaborating for conducting the above course. The experts of the BoS accepted the syllabus without any modifications.
- The Anna University nominee suggested to modify the title of the value added course “Introduction to the Design of Experiments” relevant to the content of the syllabus. The suggestion was well taken and the title was changed to “Introduction to statistical optimization”. The content of the syllabus was accepted by all the experts of BoS.
- The Anna University nominee suggested to frame the syllabus of value added course “Computer Aided Drug Discovery” with 5 units instead of 3 units. The suggestion was well taken and modification was carried out accordingly.
- The Anna University nominee suggested to include the topics related to metabolic engineering and synthetic biology in the above syllabus. Mr. S. Manibalan, the subject expert, modified the syllabus as per the suggestions.
- The amendments in the three member committee of online courses, value added courses and Industry Internship was presented. All the BoS experts accepted the changes.

- Further, the end semester result of IISem (2020-21) was presented to the BoS members. The Anna University nominee enquired about I semester results of the same batch and the reason for the decrease in the overall pass percentage in II semester. The Chairperson and Dr. D.Pradiba, clarified that there was a slight fall in the pass percentage of Mathematics subject because II semester was conducted in online mode and the students may lack in practicing problems. The explanation was accepted by the expert team. The meeting was concluded with the concurrence of BoS members.
- PG programme coordinator, DrK.Geetha, proposed the vote of thanks.

S. Maria Amalraj  
S. MARIA AMALRAJ  
UG-program coordinator-BT

P. Srinivas  
HOD/BT  
HOD  
DEPT. OF BIOTECHNOLOGY  
Kamaraj College of Engineering & Technology  
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MINUTES OF THE MEETING TO APPROVE AND RECOMMEND  
THE VALUE ADDED PROGRAM EXAMINATION FOR CREDIT

Date : 14/03/2023

Time : 10.50 AM to 12.00 Noon

Venue: HoD Cabin, Department of Biotechnology

Members Present

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

Agenda

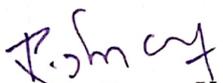
1. Welcome address – Dr.R.Shyam Kumar
2. Dissemination of the report of Industry Certified Value-Added Programme on “Mushroom Cultivation and Vermicomposting” – Dr.K.Geetha.
3. Dissemination of the Value Added Programme Guidelines in R2020 – Mr.S.Manibalan, CP/II BT.
4. Dissemination of the report on mode of conduct of examination and evaluation system – Dr.S.Karthikumar.
5. Approval of the program conduct and examination evaluation system to issue the credit as per the regulation R2021
6. Any other items with the approval of convener

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Item No.	Agenda	Discussion and Resolution
1	Welcome address	Dr.R.Shyam Kumar, Head and convener of the meeting welcomed the gathering and gave a brief introduction about the purpose and agenda of the meeting
2	Dissemination of the report of value added Program	Dr.K.Geetha, Associate professor and one of the coordinator of the event explained the objective, need, target participant, duration and expected outcome of the program organized "Industry certified value added programme on Mushroom Cultivation and Vermicomposting" during 05 <sup>th</sup> Jan 23 to 10 <sup>th</sup> Jan 23 (5 days). The program was conducted for 2 <sup>nd</sup> year B.Tech. Biotechnology as per the regulation of R2021. Biotechnology related industry personals from Japee Biotech, Virudhunagar and Vcare Agro tech, Madurai provided technical training to the students during the programme. Detailed event report is attached.
3	Dissemination of the Value -added Programme Guidelines in R2021	Mr.S.Manibalan, Assistant Professor and Chairperson of III BT, disseminated the points discussed regarding the value added programme during the BOS meeting held on 11 <sup>th</sup> November 21. The proposed syllabus for value added courses

		“Mushroom Cultivation and Vermicomposting” was accepted by Anna University Nominee.
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 30 MCQs from vermicomposting and mushroom cultivation topics each was conducted in physical mode with proper invigilation. The marks scored by each student were presented to the committee members for the approval.
5	Approval of the program conduct and examination evaluation system to issue the credit as per the regulation R2021	The three member committee (Dr.R.Shyam Kumar, Dr.K.Geetha and Dr.S.Karthikumar) was formed to scrutinize the value added program exam results to approve and recommend for credit. The committee members verified the results and forwarded to Controller of Examination through Dean Academics to consider for Credit.
6	Any other items with the approval of convener	Hence, no members raised any further clarification the meeting was end and the reports were forwarded for further process.

  
Dr.R.Shyam Kumar  
HoD/BT and Convener

  
Dr.K.Geetha  
Associate Professor/BT & Member

  
Dr.S.Karthikumar  
Associate Professor/BT & Member

  
Mr.S.Manibalan  
Assistant Professor / BT & Member



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## DEPARTMENT OF BIOTECHNOLOGY

### CIRCULAR

KAMARAJ / BT / 2022-23 / VAP-II BT

Date: 14.03.2023

Dear Students,

You are requested to join the online meeting link to attend **VAP-MUSHROOM CULTIVATION AND VERMICOMPOSTING: EXTERNAL ASSESSMENT TEST 2022-23** on **20/03/2023** at **3.00 pm**.

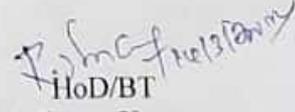
All students are instructed to bring Laptop to take the exam. Join the link 10 min before the exam timing. Only those who attended the VAP completely are eligible to take the test. Hence only those students may join the link and attend the test. The test will be conducted in proctored mode in the department.

Link:

[https://teams.microsoft.com/l/meetup-join/19%3aPuR25L-UfHdnwwA0nD5wHu4EX5-L\\_x5rSkVwqQj3pas1%40thread.tacv2/1678771750248?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%224948241d-c837-4241-ab0b-de08e44460f9%22%7d](https://teams.microsoft.com/l/meetup-join/19%3aPuR25L-UfHdnwwA0nD5wHu4EX5-L_x5rSkVwqQj3pas1%40thread.tacv2/1678771750248?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%224948241d-c837-4241-ab0b-de08e44460f9%22%7d)

  
PROGRAMME COORDINATORS

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

  
HoD/BT  
Dr R.Shyam Kumar

Copy to:

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



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**DEPARTMENT OF BIOTECHNOLOGY**

**Industry Certified Value Added Programme on**

**“MUSHROOM CULTIVATION AND**

**VERMICOMPOSTING”**

**5<sup>th</sup> to 10<sup>th</sup> January 2023**

**PROGRAM SCHEDULE**

<b>DATE</b>	<b>9.00 am to 10.40 am</b>	<b>11.00am to 12.40pm</b>	<b>1.30 pm to 4.00 pm</b>
<b>05/01/2023</b>	<b>Inaugural Function</b>	Introduction to Vermicomposting	Design, Layout and Preparation
<b>06/01/2023</b>	Vermicomposting Technology: Visit to Vermi Compost Farm at JP Sustainable Foundation, Kulloorsandai, Virudhunagar		
<b>07/01/2023</b>	Application of vermicompost and vermiwash for plant growth study	Introduction to Mushroom cultivation- design & layout	
<b>09/01/2023</b>	Cultivation of Mushroom: Sterilization of straw for Bed Preparation (Hands-on training by External Expert)	Spawn preparation and seeding (Hands-on training by External Expert)	
<b>10/01/2023</b>	Mushroom Bed preparation, Maintenance and Harvesting Techniques (Hands-on training by External Expert)		<b>Valedictory Function</b>

DEPARTMENT OF BIOTECHNOLOGY  
Industry Certified Value Added Programme  
On  
MUSHROOM CULTIVATION AND VERMICOMPOSTING

05/01/2023 to 10/01/2023

PHOTOS

DAY 1



Inauguration of VAP programme



Hands-on session on Pre-treatment of Paddy straw

DAY 2



Industrial Visit: Jeypee Biotech, Kullursandai, VNR



Jeypee Biotech: Introductory session on vermicomposting



Mr R. Palaneeswar: Large scale vermicomposting demo demonstration



Jeypee Biotech: Vermiwash production and application

**DAY 3**



Dr R. Shyam Kumar: Applications of Vermicomposting and Vermiwash



Dr K. Geetha: Introduction to Mushroom cultivation

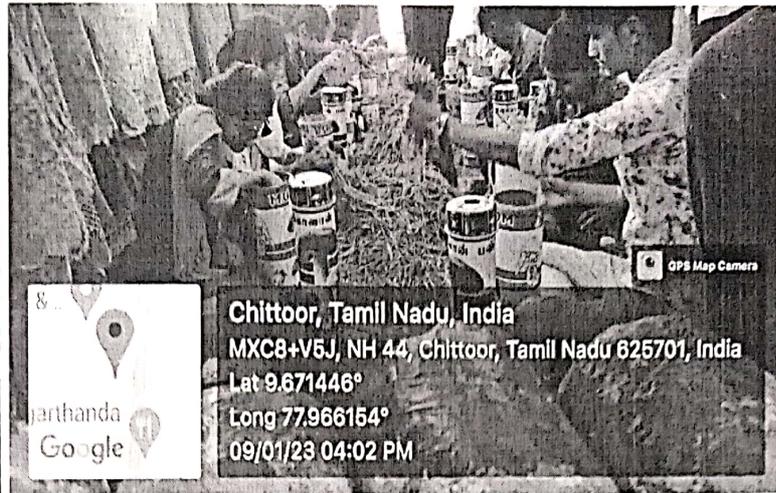
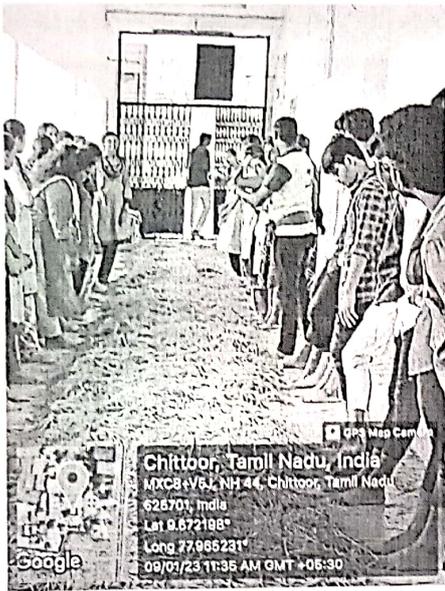
**DAY 4**



Introduction to Mushroom cultivation - Mr R. Vijay Kumar

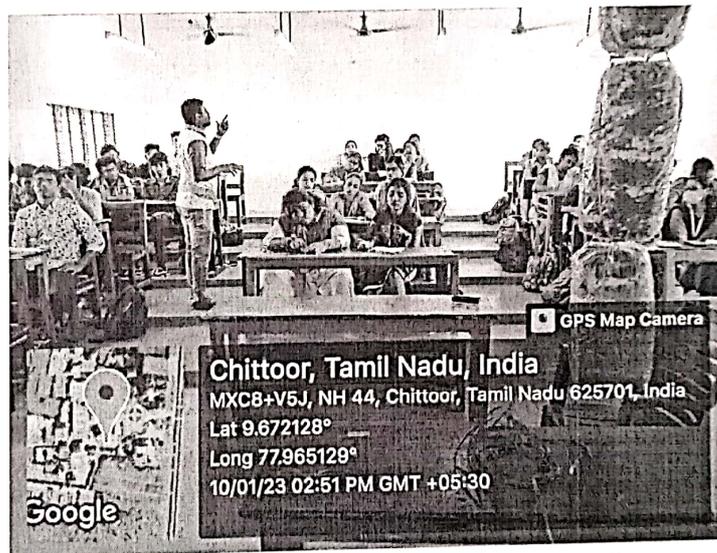
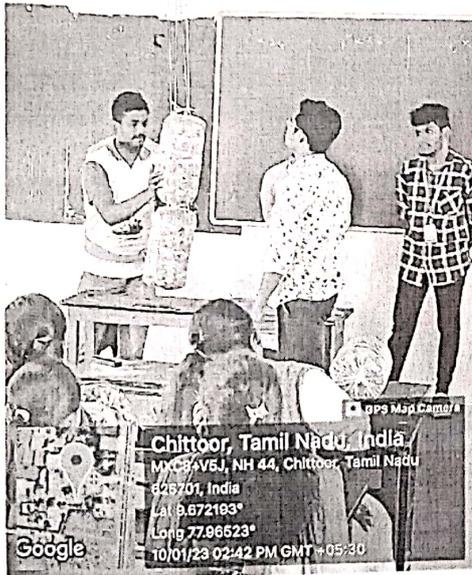


Mr R. Vijay Kumar: Theory session on Mushroom cultivation

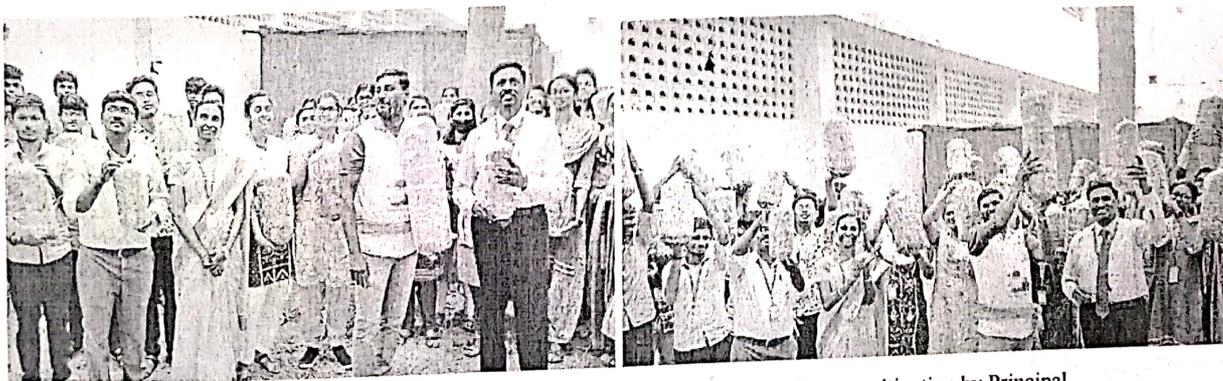


Mr R.Vijay Kumar: Hands-on session: Mushroom farming: Traditional & New tools

**DAY 5**

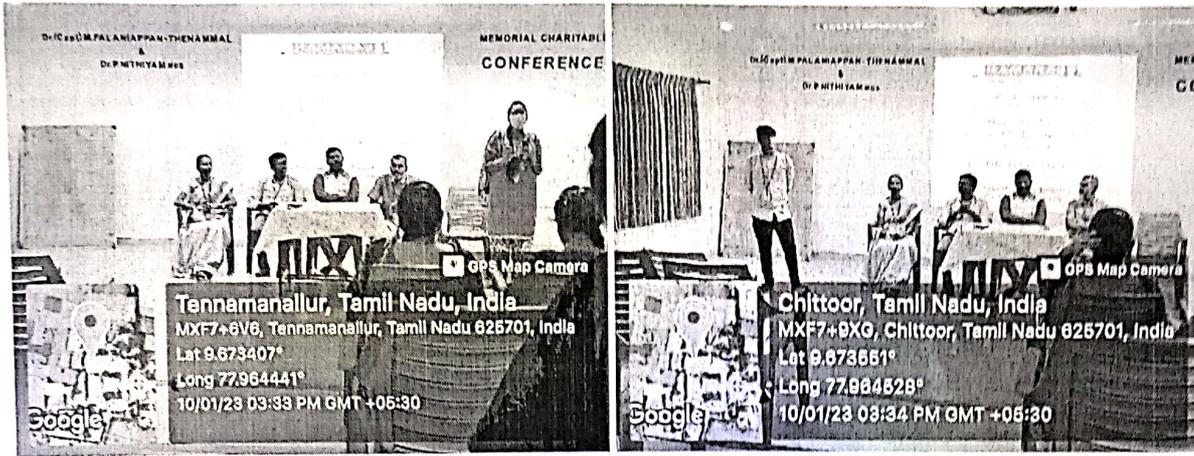


Mr R.Vijay Kumar: Hands-on session on Mushroom bed hanging

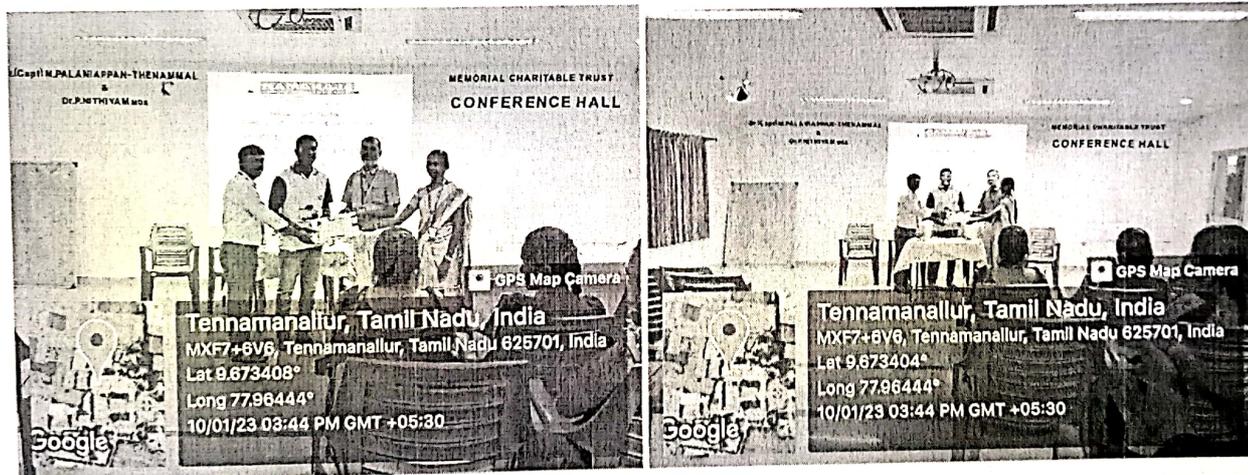


Inspection of Mushroom beds prepared by students for Oyster Mushroom cultivation by Principal

# VALEDICTORY FUNCTION



Oral Feedback by students



Honouring of chief guest: Mr R. Vijay Kumar



Certificate distribution to students

Vote of Thanks – Dr S.Karthikumar



*K. G. Ganesan*  
11/11/2023  
*[Signature]*  
Programme Coordinators

*[Signature]*  
HoD/BT

DEPARTMENT OF BIOTECHNOLOGY  
Industry Certified Value Added Programme  
On  
MUSHROOM CULTIVATION AND VERMICOMPOSTING

05/01/2023 to 10/01/2023

ONLINE PROCTORED EXTERNAL EXAMINATION – 20/03/2023

## PHOTOS

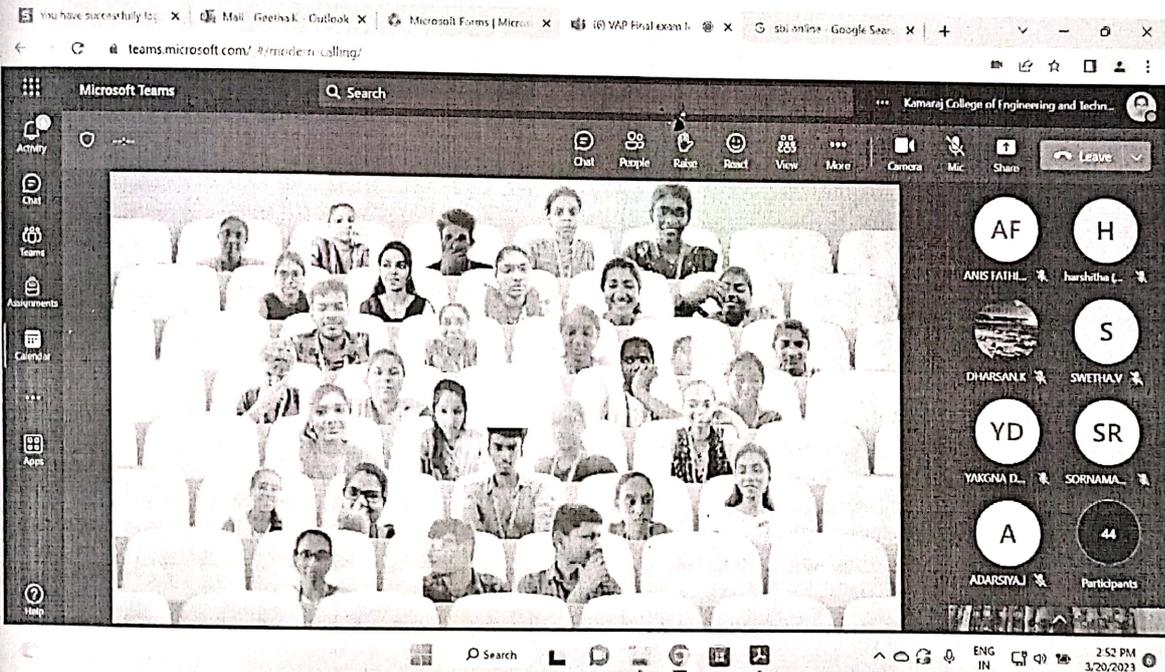


Photo 1: Online Meeting for proctored External exam – Online mode

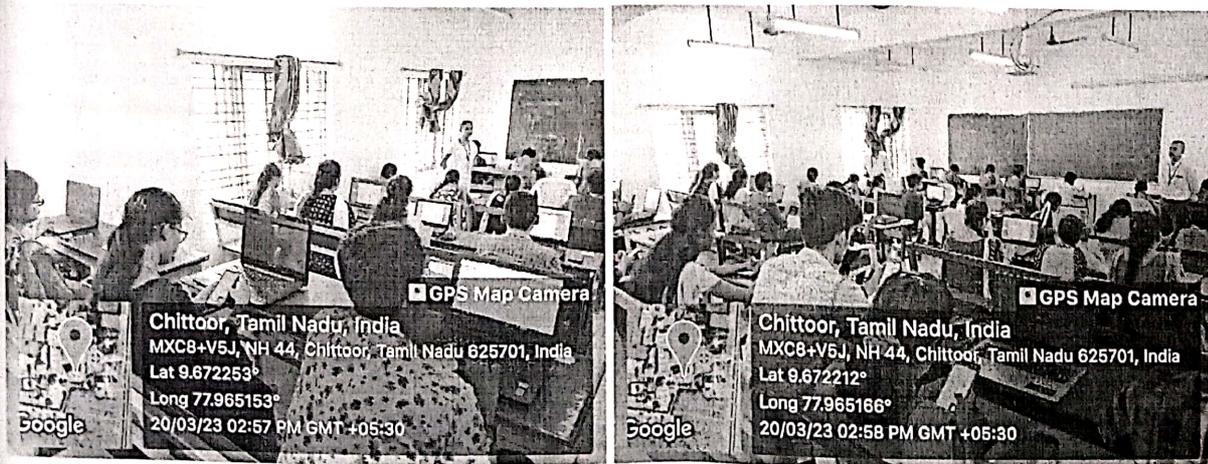


Photo 2 & 3: Students attending Online proctored mode external exam for Value Added Course

*[Handwritten signatures]*  
Programme Coordinators

*[Handwritten signature]*  
HoD/BT



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This is to certify that Mr./Ms. ABINAYA.M of  
2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
in Five days Industry certified Value Added Programme on "Mushroom Cultivation and Vermicomposting" during  
5<sup>th</sup> to 10<sup>th</sup> January 2023 organized by Department of Biotechnology in association with Vcare Agro Tech Mushroom  
Farm, Madurai.

Dr.K.Geetha

Organizing Secretary(s)

Dr.S.Karthikumar

Mr.R.Vijayakumar

Industry Expert

Director, Vcare Agro Tech

For V-Care Agro Tech

R. Vijayakumar  
Proprietor

Dr.R.Shyam Kumar

Coordinator &

HoD/BT

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Prof.S.Senthil

Principal

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This is to certify that **Mr./Ms. ADARSIYA. J** of  
2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
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Dr. R. Geetha

Organizing Secretary(s)



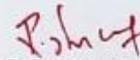
Dr. S. Karthikumar



Mr. R. Vijayakumar

Industry Expert

Director, Vcare Agro Tech  
for V-Care Agro Tech



Dr. R. Shyam Kumar

Coordinator &

HoD/BT

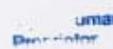
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Prof. S. Senthil

Principal

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2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
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Dr.K.Geetha

Organizing Secretary(s)

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Mr.R.Vijayakumar

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Director, Vcare Agro Tech

Dr.R.Shyam Kumar

Coordinator &  
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This is to certify that Mr./Ms. ANIS FATHIMA.S of  
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Dr.K.Geetha

Organizing Secretary(s)



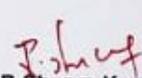
Dr.S.Karthikumar



Mr.R.Vijayakumar

Industry Expert

Director, Vcare Agro Tech  
For V-Care Agro Tech



Dr.R.Shyam Kumar

Coordinator &

HoD/BT

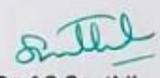
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R. Vijayakumar  
Proprietor

Kamaraj College of Engineering & Technology

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This is to certify that Mr./Ms. ARUN PRASANTH.D of  
2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
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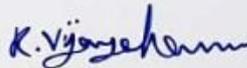


Dr.K.Geetha

Organizing Secretary(s)



Dr.S.Karthikumar



Mr.R.Vijayakumar

Industry Expert

Director, Vcare Agro Tech



Dr.R.Shyam Kumar

Coordinator &

HoD/BT



Prof.S.Senthil

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This is to certify that Mr./Ms. BALA PRIYA.V of  
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Dr.K.Geetha

Organizing Secretary(s)

Dr.S.Karthikumar

Mr.R.Vijayakumar

Industry Expert  
Director, Vcare Agro Tech

For V-Care Agro Tech

R. Vijayakumar  
Proprietor

Dr.R.Shyam Kumar

Coordinator &  
HoD/BT  
HOD

Prof.S.Senthil

Principal

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This is to certify that Mr./Ms. BAYADHARSHINI K of  
2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
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Dr.K.Geetha

Organizing Secretary(s)

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Mr.R.Vijayakumar

Industry Expert  
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Dr.R.Shyam Kumar

Coordinator &  
HoD/BT

Prof.S.Senthil

Principal

For V-Care Agro Tech

R. Vijayakumar  
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This is to certify that Mr./Ms. DEEPIKA.S of  
2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
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Farm, Madurai.

  
Dr.K.Geetha

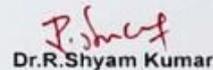
Organizing Secretary(s)

  
Dr.S.Karthikumar

  
Mr.R.Vijayakumar

Industry Expert  
Director, Vcare Agro Tech  
For V-Care Agro Tech

R. Vijayakumar  
Proprietor

  
Dr.R.Shyam Kumar

Coordinator &  
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Prof.S.Senthil

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ON

**Mushroom Cultivation and Vermicomposting**

This is to certify that Mr./Ms. DIVYA JOTHI. K of  
2<sup>nd</sup> year, B.Tech., Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
in Five days Industry certified Value Added Programme on "Mushroom Cultivation and Vermicomposting" during  
5<sup>th</sup> to 10<sup>th</sup> January 2023 organized by Department of Biotechnology in association with Vcare Agro Tech Mushroom  
Farm, Madurai.

Dr. K. Geetha

Organizing Secretary(s)

Dr. S. Karthikumar

Mr. R. Vijayakumar

Industry Expert  
Director, Vcare Agro Tech  
For V-Care Agro Tech

R. Vijayakumar  
Proprietor

Dr. R. Shyam Kumar

Coordinator &  
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This is to certify that Mr./Ms. FEMINA FATHIMA.A of  
2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
in Five days Industry certified Value Added Programme on "Mushroom Cultivation and Vermicomposting" during  
5<sup>th</sup> to 10<sup>th</sup> January 2023 organized by Department of Biotechnology in association with Vcare Agro Tech Mushroom  
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This is to certify that Mr./Ms. HARI KRISHNAN, A.M. of  
2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
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This is to certify that Mr./Ms. HARINI.M of 2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated in Five days Industry certified Value Added Programme on "Mushroom Cultivation and Vermicomposting" during 5<sup>th</sup> to 10<sup>th</sup> January 2023 organized by Department of Biotechnology in association with Vcare Agro Tech Mushroom Farm, Madurai.

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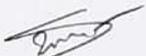
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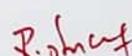
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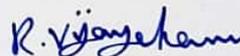
**Mushroom Cultivation and Vermicomposting**

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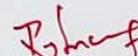
  
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This is to certify that Mr./Ms. JAYASREE. A of  
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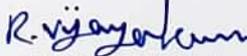
**Mushroom Cultivation and Vermicomposting**

This is to certify that Mr./Ms. KRISHA. K.S. of 2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated in Five days Industry certified Value Added Programme on "Mushroom Cultivation and Vermicomposting" during 5<sup>th</sup> to 10<sup>th</sup> January 2023 organized by Department of Biotechnology in association with Vcare Agro Tech Mushroom Farm, Madurai.

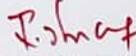
  
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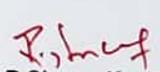
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This is to certify that Mr./Ms. MADHUMITHA.S of  
2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
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This is to certify that Mr./Ms. MOHANA KANNAN . N of  
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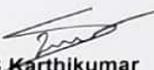
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This is to certify that Mr./Ms. NANDHINI. G of  
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This is to certify that **Mr./Ms.** NITHYASHREE J of  
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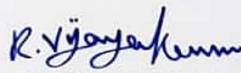
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This is to certify that Mr./Ms. POOJA . C of  
2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated  
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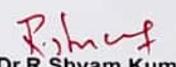
  
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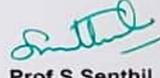
  
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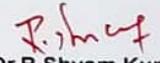
  
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Mr. R. Vijayakumar  
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This is to certify that Mr./Ms. RIDHU VARSHINI T.S. of  
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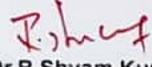
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This is to certify that Mr./Ms. RINITA JONELLIA . A of 2<sup>nd</sup> year, B.Tech.,Biotechnology of Kamaraj College of Engineering and Technology (Autonomous) has participated in Five days Industry certified Value Added Programme on "Mushroom Cultivation and Vermicomposting" during 5<sup>th</sup> to 10<sup>th</sup> January 2023 organized by Department of Biotechnology in association with Vcare Agro Tech Mushroom Farm, Madurai.

  
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This is to certify that Mr./Ms. SABARI RAJ .B of  
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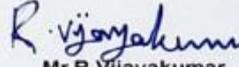
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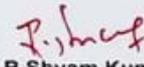
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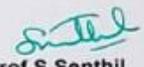
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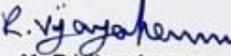
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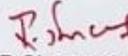
  
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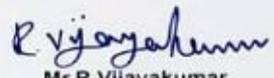
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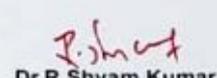
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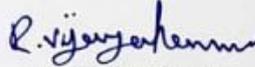
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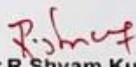
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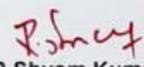
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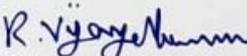
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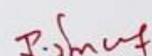
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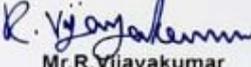
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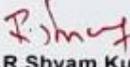
  
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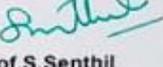
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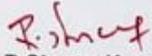
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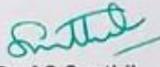
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# VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING: EXTERNAL ASSESSMENT TEST 2022-23

Answer all question

\* Required

1. Name \*

2. Roll No \*

3. Register No \*



4. Class \*

5. Date \*

Please input date (M/d/yyyy)



PART A : 30 x 1 = 30 Marks

6. 1. Which of the following is a commonly used earthworm species for the vermicomposting process? (1 Point)

- a) Eisenia fetida
- b) Perionix excavatus
- c) Both (a) and (b)
- d) None of the above

7. 2. Green revolution is associated with which of the following? (1 Point)

- a) Sericulture
- b) Agriculture
- c) Aquaculture
- d) Vermiculture

8. 3. Vermicompost is used as a biofertilizer because it is rich in \_\_\_\_\_  
(1 Point)

- a) Calcium
- b) Nitrogen
- c) Phosphorus
- d) All of the above

9. 4. Which layer of the atmosphere contains Ozone? (1 Point)

- a) Troposphere
- b) Stratosphere
- c) Mesosphere
- d) Thermosphere

10. 5. Why do you need to weigh your worms before putting them in your compost bin? (1 Point)

- a) to know how much to feed them
- b) to know how many there are
- c) to see how much weight they are putting on
- d) to know what will be the end product

11. 6. Are most developing-country farmers engaged in subsistence or commercial production? (1 Point)

- a) Almost all are subsistence farmers.
- b) Very few engage in subsistence production, instead selling almost all of their produce on the market.
- c) Virtually all small-scale producers are engaged in some self-provisioning and market sales.
- d) 37% engage in pure subsistence production.

12. 7. How will climate change affect future food security? (1 Point)

- a) It will have negative impacts in most developing countries because of the increased frequency of droughts, storms and floods.
- b) The impact will be positive, because drier weather will mean less habitat for malaria mosquitoes, so fewer workers will be sick at harvest time.
- c) The impact will be positive because there will be more carbon dioxide available for plant photosynthesis.
- d) There currently is no scientific consensus as to whether climate change is occurring or whether it will over the next 50 years.

13. 8. What does it mean if your compost bin begins to smell? (1 Point)

- a) You have too much bedding and not enough soil.
- b) You are feeding the worms too much.
- c) You have too many worms in the bin.
- d) You do not have enough feed in the bedding.

14. 9. Which of the following is not a major objective of Vermicomposting? (1 Point)

- a) To elevate the value of original material
- b) To accelerate the rate of degradation
- c) To obtain toxic products
- d) To obtain products free of any pollutants

15. 10. In which method of disposal of municipal solid waste, the waste is dumped in the soil? (1 Point)

- a) Incineration
- b) Composting
- c) Land filing
- d) Shredding

16. 11. Which of the following is a biodegradable waste? (1 Point)

- a) Polythene bags
- b) Synthetic fiber
- c) Food waste
- d) Paper

17. 12. The waste produced in cotton mills are ..... (1 Point)

- a) Municipal solid waste
- b) Non biodegradable waste
- c) Hazardous waste
- d) Non-Hazardous waste

18. 13. All are true with respect to vermicomposting except (1 Point)

- a) improving soil aggregation,
- b) structure, and soil fertility,
- c) decreasing soil microbial population and enzymes,
- d) improving moisture-holding capacity of soil

19. 14. Which of the following waste can be decomposed by bacteria?  
(1 Point)

- a) Radioactive substance
- b) Ashes
- c) Food waste
- d) Rubbish

20. 15. If oxygen levels are high, anaerobic processes will take over and cause chemical reactions and strong odors that will stress or kill the worms. (1 Point)

True

False

21. 16. What is the botanical name of oyster mushroom? (1 Point)

a) *Pleurotus ostreatus*

b) *Agaricus bisporus*

c) *Lentinus edodes*

d) *Pleurotus eryngii*

22. 17. Why burning waste is not an acceptable practice of solid waste management? (1 Point)

a) Because it causes several environmental issues

b) Because it requires modern technologies

c) Because it is very costly

d) Because it requires lot of space

23. 18. Which of the following resembles the rich topsoil in context to solid waste composting? (1 Point)

- a) Bed rock
- b) Humus
- c) Sub soil
- d) Weathered rock

24. 19. What is the carrier material widely used for spawn production? (1 Point)

- a) White sorghum
- b) Wheat
- c) Rice
- d) Beans

25. 20. Which of the following is an end product of anaerobic composting which is a source of energy? (1 Point)

- a) Toxic products
- b) Alcohol
- c) Amino acid
- d) Biogas

26. 21. Which of the following is required to sterilize rice straw? (1 Point)

- a) Ethanol
- b) Formaldehyde
- c) Phenol
- d) Dettol

27. 22. What is the purpose of making holes in mushroom bed? (1 Point)

- a) to release heat
- b) to provide air circulation
- c) to make buds to come out
- d) all of the above

28. 23. Pre-treatment of the wastes by composting leads to greenhouse effect. (1 Point)

- a) True
- b) False

29. 24. Which of the following is not a part of mushroom? (1 Point)

- a) Pilus
- b) Stipe
- c) Annulus
- d) Stigma

30. 25. Which of the following type of mushroom is widely cultivated? (1 Point)

- a) White button mushroom
- b) Oyster mushroom
- c) Paddy straw mushroom
- d) Milky mushroom

31. 26. Mycelium embedded in gills are called as (1 Point)

- a) Stromma
- b) Pilus
- c) Stipe
- d) Annulus

32. 27. The fungus cell contains.....? (1 Point)

- a) Protoplasm
- b) Cytoplasm
- c) Protoplasm including cytoplasm
- d) None of the above

33. 28. Where is National Research Centre for Mushroom located? (1 Point)

- a) Tamilnadu
- b) Kerala
- c) Delhi
- d) Himachal Pradesh

34. 29. Mushroom cultivation is not useful in (1 Point)

- a) Biogas production
- b) Biological control prevention of crop diseases
- c) Recycling of agriculture waste
- d) Treatment of cancer

35. 30. How to seed mushroom spawn in a bed? (1 Point)

- a) Middle of the bed as single layer
- b) Bottom of the bed as single layer
- c) Top of the bed as single layer
- d) Multiple layers from bottom to top

PART B: **15 x 2 = 30 Marks**

36. 1. Earthworms are considered friends of the farmers. Select from the following the correct reasons for the same:

A. Earthworms eat the dead leaves and plants and their droppings fertilise the soil.

B. Earthworms eat the weeds and save the main crop.

C. Earthworms soften the soil by digging underground.

D. The tunnels made by the earthworms provide easy passage to air and water into the soil. (2 Points)

a) B, C and D

b) C, D and A

c) A and C only

d) A, B and C

37. 2. Vermicompost is a manure prepared....? (2 Points)

a) in factories

b) from plants

c) from dead animals

d) by earthworms

38. 3. Match the following:

- |                        |                     |
|------------------------|---------------------|
| (a) Mixed fertilizer   | 1. DAP              |
| (b) Complex fertilizer | 2. NPK              |
| (c) Biofertilizer      | 3. Oil Cake         |
| (d) Organic fertilizer | 4. Algae (2 Points) |

- a) (a) - 1; (b) - 2; (c) - 3; (d) - 4
- b) (a) - 2; (b) - 1; (c) - 4; (d) - 3
- c) (a) - 3; (b) - 2; (c) - 1; (d) - 4
- d) (a) - 4; (b) - 3; (c) - 2; (d) - 1

39. 4. In order to get more yield from his fields, a farmer is growing paddy crops over and over again using excess of fertilizer and pesticides. This practice will make the soil of his fields .... (2 Points)

- a) more useful for paddy crops only
- b) fertile for other crops also
- c) fit for ploughing and sowing seeds
- d) ultimately unfit for growing any crop

40. 5. Is there any biological biocomposting method for waste degradation other than vermicomposting? (2 Points)

Yes

No

41. 6. Which epigenic earthworm species has high ability to tolerate environmental conditions like temperature, pH and moisture contents? (2 Points)

a) Eisenia fetida

b) Perionix excavatus

c) Lumbricus terrestris

d) Amynthus mekongianus

42. 7. During vermicomposting why is the pH of the substrate decreasing towards neutral pH? (2 Points)

a) Due to addition of water

b) Due to addition of earthworms

c) Production of carbon dioxide and organic acids by microbial metabolism during decomposition

d) Because of decrease in organic matter

43. 8. Why vermicompost contains more NPK than Farm yard manure?  
(2 Points)

- a) N in FYM is lost during preparation and storage mainly as  $\text{NH}_3$  volatilisation and  $\text{NO}_3$  leaching.
- b) Vermicompost is made from organic waste alone
- c) Farm yard manure is directly used on plants
- d) Vermicompost contains earthworms also.

44. 9. To which division does Mushroom belong? (2 Points)

- a) Basidiomycetes
- b) Pteridophyta
- c) Thallophyta
- d) Mollusca

45. 10. Mycellium produces white or colored umbrella shaped fruiting bodies called \_\_\_\_ (2 Points)

- a) Haphae
- b) Basidiocarp
- c) Annalus
- d) Seta

46. 11. What is a symptom of mushroom poisoning? (2 Points)

- a) Mild nausea
- b) Vomiting
- c) Diarrhea
- d) All of the Above

47. 12. Mushroom Farm Layout requires (2 Points)

- a) Composting unit
- b) Prewetting area
- c) Both
- d) None of these

48. 13. Spawn is the \_\_\_\_\_ of Mushroom (2 Points)

- a) Spores
- b) Mycellium
- c) Fruit
- d) Both a and b

49. 14. Alternative name of Agaricus is (2 Points)

- a) Button mushroom
- b) Paddy straw mushroom
- c) Oyster mushroom
- d) Dhingri mushroom

50. 15. Mushrooms are good source of (2 Points)

- a) Carbohydrates
- b) Protein
- c) Fats
- d) Vitamins

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**Industry Certified Value Added Programme**

**On**

**MUSHROOM CULTIVATION AND VERMICOMPOSTING**

**05/01/2023 to 10/01/2023**

**Attendance**

S.No.	REG NO	ROLL NO	Student Name	05.01.2023		06.01.2023		07.01.2023		09.01.2023		10.01.2023		Total Hours	No of hours absent	Attendance %
				FN	AN											
1	920421214001	920421UBT016	ABINAYA.M	4	2	4	2	4	2	4	2	4	2	30	2-OD	100
2	920421214002	920421UBT030	ADARSIYA.J	4	2	4	2	4	2	4	2	4	2	30	0	100
3	920421214003	920421UBT005	ANANTHA KANNAN.V	4	2	4	2	4	2	4	2	4	2	30	0	100
4	920421214004	920421UBT039	ANIS FATHIMA.S	4	2	4	2	4	2	4	2	4	2	30	0	100
5	920421214005	920421UBT002	ARUN PRASANTH.D	4	2	4	2	4	2	4	2	4	2	30	0	100
6	920421214006	920421UBT026	BALA PRIYA.V	4	2	4	2	4	2	4	2	4	2	30	0	100
7	920421214007	920421UBT009	BAVADHARSHINI.K	4	2	4	2	4	2	4	2	4	2	30	0	100
8	920421214008	920421UBT015	DEEPIKA.S	4	2	4	2	4	2	4	2	4	2	30	0	100
9	920421214009	920421UBT013	DHARSAN.K	4	2	4	2	4	2	4	2	4	2	30	0	100
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12	920421214013	920421UBT006	GAJALAKSHMI.K	4	2	4	2	4	2	4	2	4	2	30	0	100
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17	920421214018	920421UBT043	JANASRITHAN.S	AB	AB	0	30	0								
18	920421214019	920421UBT040	JAYASREE.A	4	2	4	2	4	2	4	2	4	2	30	0	100
19	920421214020	920421UBT014	JAYA SUBHASH.V	AB	AB	0	30	0								
20	920421214021	920421UBT044	KRISHA.K.S.	4	2	4	2	4	2	4	2	L	L	24	6	80
21	920421214022	920421UBT012	MADHUMITHA.S	4	2	4	2	4	2	4	2	4	2	30	0	100
22	920421214023	920421UBT042	MOHANA KANNAN.N	4	2	4	2	4	2	4	2	4	2	30	0	100
23	920421214024	920421UBT038	MUTHUGANESH.S	4	2	4	2	4	2	4	2	4	2	30	0	100
24	920421214025	920421UBT049	NANDHINI.G	4	2	4	2	4	2	4	2	4	2	30	6-OD	100
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27	920421214028	920421UBT023	PRAVEEN.J	4	2	4	2	4	2	4	2	4	2	30	0	100
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31	920421214032	920421UBT046	RINITA JONELLIA.A	4	2	4	2	4	2	4	2	4	2	30	0	100
32	920421214033	920421UBT007	SABARI RAJ.B	4	2	4	2	4	2	4	2	4	2	30	0	100
33	920421214034	920421UBT031	SANMITAA.S	4	2	4	2	4	2	4	2	4	2	30	2-OD	100



DEPARTMENT OF BIOTECHNOLOGY  
Industry Certified Value Added Programme  
On  
MUSHROOM CULTIVATION AND VERMICOMPOSTING  
05/01/2023 to 10/01/2023

Attendance

S.No.	REG NO	ROLL NO	Student Name	05.01.2023		06.01.2023		07.01.2023		09.01.2023		10.01.2023		Total Hours	No of hours	Attendance
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35	920421214036	920421UBT033	SASI BALAN.M	4	2	4	2	4	2	4	2	4	2	30	0	100
36	920421214037	920421UBT027	SHALINI.S	AB	AB	4	4	AB	AB	4	4	4	4	24	6-AB, 6-compensated during other days	80
37	920421214038	920421UBT008	SHAMYUKTHA.T	4	2	4	2	4	2	4	2	4	2	30	0	100
38	920421214039	920421UBT010	SIVA GANESH.S	AB	AB	0	30	0								
39	920421214040	920421UBT022	SORNAMALA RAMYAK	4	2	4	2	4	2	4	2	4	2	30	0	100
40	920421214042	920421UBT020	SUBITHA.S	4	2	4	2	4	2	4	2	4	2	30	0	100
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43	920421214045	920421UBT018	SWETHA.V	4	2	4	2	4	2	4	2	4	2	30	0	100
44	920421214046	920421UBT045	UDITH SARAN.N	4	2	4	2	4	2	4	2	4	2	30	0	100
45	920421214047	920421UBT029	VIJAYASHREE.V	4	2	4	2	4	2	4	2	4	2	30	0	100
46	920421214048	920421UBT025	YAKGNADEVLM	4	2	4	2	4	2	4	2	4	2	30	0	100
47	920421214049	920421UBT024	YOGA DHARSHAN.S	4	2	4	2	4	2	4	2	4	2	30	0	100

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Programme Coordinators

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Enternal exam 20/3/2023

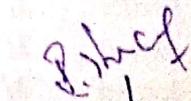
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Geetha.K		Joined	3/20/2023, 2:40:11 PM
SWETHA.V		Joined	3/20/2023, 2:40:27 PM
SWETHA.V		Left	3/20/2023, 2:40:49 PM
SWETHA.V		Joined	3/20/2023, 2:41:00 PM
SWETHA.V		Left	3/20/2023, 2:42:06 PM
SWETHA.V		Joined	3/20/2023, 2:42:11 PM
MADHUMITHA.S		Joined	3/20/2023, 2:41:00 PM
HARINI.T		Joined	3/20/2023, 2:41:05 PM
ARUN PRASANTH.D		Joined	3/20/2023, 2:41:07 PM
ANANTHA KANNAN.V		Joined	3/20/2023, 2:41:15 PM
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FEMINA FATHIMA.A		Joined	3/20/2023, 2:41:24 PM
ADARSIYA.J		Joined	3/20/2023, 2:41:34 PM
HARINI.M		Joined	3/20/2023, 2:41:40 PM
GAJALAKSHMI.K		Joined	3/20/2023, 2:41:46 PM
DEEPIKA.S		Joined	3/20/2023, 2:41:50 PM
SHALINI.S		Joined	3/20/2023, 2:41:52 PM
HARI KRISHNAN.A.M		Joined	3/20/2023, 2:42:01 PM
SABARI RAJ.B		Joined	3/20/2023, 2:42:12 PM
BALA PRIYA.V		Joined	3/20/2023, 2:42:16 PM
NANDHINI.G		Joined	3/20/2023, 2:42:18 PM
UDITSARAN.N		Joined	3/20/2023, 2:42:18 PM
ANIS FATHIMA.S		Joined	3/20/2023, 2:42:21 PM
RINITA JONELLIA.A		Joined	3/20/2023, 2:42:22 PM
MOHANA KANNAN.N		Joined	3/20/2023, 2:42:39 PM
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NITHYA SHREE.J		Joined	3/20/2023, 2:42:57 PM
DHARSAN.K		Joined	3/20/2023, 2:43:12 PM
ABINAYA.M		Joined	3/20/2023, 2:43:19 PM
MUTHU GANESH.S		Joined	3/20/2023, 2:43:25 PM
SUJITHA.R		Joined	3/20/2023, 2:43:36 PM
PRIYADHARSHINI.S		Joined	3/20/2023, 2:43:44 PM
JAYASREE.A		Joined	3/20/2023, 2:44:05 PM
SUBITHA.S		Joined	3/20/2023, 2:55:36 PM
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PRAVEEN.J		Joined	3/20/2023, 2:44:17 PM
YAGNA DEVI.M		Joined	3/20/2023, 2:44:21 PM
SHAMYUKTHA.T		Joined	3/20/2023, 2:44:32 PM
DIVYA JOTHI.K		Joined	3/20/2023, 2:44:49 PM
PRİYANGKA.S		Joined	



SANTHOSH KAVERI.SR	Joined	3/20/2023, 2:44:55 PM
SANMITAA.S	Joined	3/20/2023, 2:44:56 PM
VIJAYA SHREE.V	Joined	3/20/2023, 2:45:08 PM
VIJAYA SHREE.V	Left	3/20/2023, 2:47:15 PM
VIJAYA SHREE.V	Joined	3/20/2023, 2:47:41 PM
harshitha (Guest)	Joined	3/20/2023, 2:45:36 PM
harshitha (Guest)	Left	3/20/2023, 2:56:12 PM
BAVADHARSHINI.K	Joined	3/20/2023, 2:46:26 PM
yogadharshan (Guest)	Joined	3/20/2023, 2:46:30 PM
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SASIBALAN.M	Joined	3/20/2023, 2:48:15 PM
POOJ.C	Joined	3/20/2023, 2:48:22 PM
SORNAMALA RAMYA.K	Joined	3/20/2023, 2:48:24 PM
Yogadharshan (Guest)	Joined	3/20/2023, 2:50:20 PM
RIDHU VARSHINI.R.S	Joined	3/20/2023, 2:51:00 PM
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KRISHA.K.S.	Joined	3/20/2023, 2:52:37 PM
KRISHA.K.S.	Left	3/20/2023, 2:52:43 PM
yogadharshan (Guest)	Joined	3/20/2023, 2:55:33 PM
yogadharshan (Guest)	Left	3/20/2023, 2:56:13 PM
HARSHITHA.S	Joined	3/20/2023, 2:56:12 PM
yogadharshan (Guest)	Joined	3/20/2023, 2:56:56 PM
yogadharshan (Guest)	Left	3/20/2023, 2:57:23 PM

  
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### WVA- MUSHROOM CULTIVATION AND VERMICOMPOSTING EXTERNAL ASSESSMENT TEST 2022-23

31:09 Time to complete  
28/60 Points

Question	Score	Points
1	0	1 pt
2	0	1 pt
3	0	1 pt
4	0	1 pt
5	0	1 pt
6	0	1 pt
7	0	1 pt
8	0	1 pt
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45	0	1 pt
46	0	1 pt
47	0	1 pt
48	0	1 pt
49	0	1 pt
50	0	1 pt

X Incorrect 0/1 Points 0 / 1 pt Auto-graded

7. 2. Green revolution is associated with which of the following?

- a) Sericulture
- b) Agriculture
- c) Aquaculture
- d) Vermiculture

X Incorrect 0/1 Points 0 / 1 pt Auto-graded

8. 3. Vermicompost is used as a biofertilizer because it is rich in \_\_\_\_\_.

- a) Calcium
- b) Nitrogen
- c) Phosphorus
- d) All of the above

Question	Score	Points
1	0	1 pt
2	0	1 pt
3	0	1 pt
4	0	1 pt
5	0	1 pt
6	0	1 pt
7	0	1 pt
8	0	1 pt
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44	0	1 pt
45	0	1 pt
46	0	1 pt
47	0	1 pt
48	0	1 pt
49	0	1 pt
50	0	1 pt

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

15. 10. In which method of disposal of municipal solid waste, the waste is dumped in the soil?

- a) Incineration
- b) Composting
- c) Land filling
- d) Shredding

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

16. 11. Which of the following is a biodegradable waste?

- a) Polythene bags
- b) Synthetic fiber
- c) Food waste
- d) Paper

Score / 0 pts

4. Class \*

2nd year (Biotechnology)

Score / 0 pts

5. Date \*

3/20/2023

**PART A : 30 x 1 = 30 Marks**

Answer all questions

X Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

6. 1. Which of the following is a commonly used earthworm species for the vermicomposting process?

- a) Eisenia fetida
- b) Perionix excavatus
- c) Both (a) and (b)
- d) None of the above

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X Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

13. 8. What does it mean if your compost bin begins to smell?

- a) You have too much bedding and not enough soil.
- b) You are feeding the worms too much.
- c) You have too many worms in the bin.
- d) You do not have enough feed in the bedding.

✓ Correct 1/1 Points

14. 9. Which of the following is not a major objective of Vermicomposting?

- a) To elevate the value of original material
- b) To accelerate the rate of degradation
- c) To obtain toxic products
- d) To obtain products free of any pollutants

1 / 1 pt  
Auto-graded

X Incorrect 0/1 Points

9. 4. Which layer of the atmosphere contains Ozone?

- a) Troposphere
- b) Stratosphere
- c) Mesosphere
- d) Thermosphere

✓ Correct 1/1 Points

10. 5. Why do you need to weigh your worms before putting them in your compost bin?

- a) to know how much to feed them
- b) to know how many there are
- c) to see how much weight they are putting on
- d) to know what will be the end product

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X Incorrect 0/1 Points

17. 12. The waste produced in cotton mills are .....

- a) Municipal solid waste
- b) Non biodegradable waste
- c) Hazardous waste
- d) Non-Hazardous waste

✓ Correct 1/1 Points

18. 13. All are true with respect to vermicomposting except

- a) improving soil aggregation,
- b) structure, and soil fertility,
- c) decreasing soil microbial population and enzymes,
- d) improving moisture-holding capacity of soil



3:43 PM

✓ Correct 1/1 Points  
 19. 14. Which of the following waste can be decomposed by bacteria?  
 a) Radioactive substance  
 b) Ashes  
 c) Food waste ✓  
 d) Rubbish

1 / 1 pt  
 Auto-graded

X Incorrect 0/1 Points  
 20. 15. If oxygen levels are high, anaerobic processes will take over and cause chemical reactions and strong odors that will stress or kill the worms.  
 True  
 False ✓

0 / 1 pt  
 Auto-graded

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1:43 PM

X Incorrect 0/1 Points  
 27. 22. What is the purpose of making holes in mushroom bed?  
 a) to release heat  
 b) to provide air circulation  
 c) to make buds to come out  
 d) all of the above ✓

0 / 1 pt  
 Auto-graded

✓ Correct 1/1 Points  
 28. 23. Pre-treatment of the wastes by composting leads to greenhouse effect.  
 a) True  
 b) False ✓

1 / 1 pt  
 Auto-graded

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3/20/23, 3:43 PM

X Incorrect 0/1 Points  
 23. 18. Which of the following resembles the rich topsoil in context to solid waste composting?  
 a) Bed rock  
 b) Humus ✓  
 c) Sub soil  
 d) Weathered rock

0 / 1 pt  
 Auto-graded

X Incorrect 0/1 Points  
 24. 19. What is the carrier material widely used for spawn production?  
 a) White sorghum ✓  
 b) Wheat  
 c) Rice  
 d) Beans

0 / 1 pt  
 Auto-graded

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3/20/23, 3:43 PM

X Incorrect 0/1 Points  
 31. 26. Mycelium embedded in gills are called as  
 a) Stromma ✓  
 b) Pilus  
 c) Stipe  
 d) Annulus

0 / 1 pt  
 Auto-graded

X Incorrect 0/1 Points  
 32. 27. The fungus cell contains.....?  
 a) Protoplasm  
 b) Cytoplasm  
 c) Protoplasm including cytoplasm ✓  
 d) None of the above

0 / 1 pt  
 Auto-graded

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✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

21. 16. What is the botanical name of oyster mushroom?

- a) Pleurotus ostreatus ✓
- b) Agaricus bisporus
- c) Lentinus edodes
- d) Pleurotus eryngii

✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

22. 17. Why burning waste is not an acceptable practice of solid waste management?

- a) Because it causes several environmental issues ✓
- b) Because it requires modern technologies
- c) Because it is very costly
- d) Because it requires lot of space

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✗ Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

29. 24. Which of the following is not a part of mushroom?

- a) Pilius
- b) Stipe
- c) Annulus
- d) Stigma ✓

✗ Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

30. 25. Which of the following type of mushroom is widely cultivated?

- a) White button mushroom
- b) Oyster mushroom
- c) Paddy straw mushroom
- d) Milky mushroom ✓

✓ Correct 1/1 Points

25. 20. Which of the following is an end product of anaerobic composting which is a source of energy?

- a) Toxic products
- b) Alcohol
- c) Amino acid
- d) Biogas ✓

✗ Incorrect 0/1 Points

26. 21. Which of the following is required to sterilize rice straw?

- a) Ethanol
- b) Formaldehyde ✓
- c) Phenol
- d) Dettol

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✓ Correct 1/1 Points

33. 28. Where is National Research Centre for Mushroom located?

- a) Tamilnadu
- b) Kerala
- c) Delhi
- d) Himachal Pradesh ✓

✗ Incorrect 0/1 Points

34. 29. Mushroom cultivation is not useful in

- a) Biogas production
- b) Biological control prevention of crop diseases ✓
- c) Recycling of agriculture waste
- d) Treatment of cancer

3/20/23, 3:43 PM VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING. EXTERNAL ASSESSMENT TEST 2022-23

1 / 1 pt Auto-graded

37. How to select mushroom spawn in a bed?

- a) Middle of the bed as single layer
- b) Bottom of the bed as single layer
- c) Top of the bed as single layer
- d) Multiple layers from bottom to top ✓

**PART B: 15 x 2 = 30 Marks**  
Answer all questions

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2 / 2 pts Auto-graded

37. 2. Vermicompost is a manure prepared...?

- a) in factories
- b) from plants
- c) from dead animals
- d) by earthworms ✓

✓ Correct 2/2 Points

2 / 2 pts Auto-graded

38. 3. Match the following:

(a) Mixed fertilizer	1. DAP
(b) Complex fertilizer	2. NPK
(c) Biofertilizer	3. Oil Cake
(d) Organic fertilizer	4. Algae

- a) (a) - 1; (b) - 2; (c) - 3; (d) - 4
- b) (a) - 2; (b) - 1; (c) - 4; (d) - 3 ✓
- c) (a) - 3; (b) - 2; (c) - 1; (d) - 4
- d) (a) - 4; (b) - 3; (c) - 2; (d) - 1

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2 / 2 pts Auto-graded

41. 6. Which epigenic earthworm species has high ability to tolerate environmental conditions like temperature, pH and moisture contents?

- a) *Eisenia fetida* ✓
- b) *Perionix excavatus*
- c) *Lumbricus terrestris*
- d) *Amyntas mekongianus*

X Incorrect 0/2 Points

0 / 2 pts Auto-graded

42. 7. During vermicomposting why is the pH of the substrate decreasing towards neutral pH?

- a) Due to addition of water
- b) Due to addition of earthworms
- c) Production of carbon dioxide and organic acids by microbial metabolism during decomposition ✓
- d) Because of decrease in organic matter

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2 / 2 pts Auto-graded

45. 10. Mycelium produces white or colored umbrella shaped fruiting bodies called \_\_\_\_

- a) Haphae
- b) Basidiocarp ✓
- c) Annulus
- d) Seta

✓ Correct 2/2 Points

2 / 2 pts Auto-graded

46. 11. What is a symptom of mushroom poisoning?

- a) Mild nausea
- b) Vomiting
- c) Diarrhea
- d) All of the Above ✓

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0 / 2 pts  
Auto-graded

✗ Incorrect 0/2 Points

36. 1. Earthworms are considered friends of the farmers. Select from the following the correct reasons for the same:

- A. Earthworms eat the dead leaves and plants and their droppings fertilise the soil.
- B. Earthworms eat the weeds and save the main crop.
- C. Earthworms soften the soil by digging underneath.
- D. The tunnels made by the earthworms provide easy passage to air and water into the soil.

- a) B, C and D
- b) C, D and A ✓
- c) A and C only
- d) A, B and C

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✗ Incorrect 0/2 Points

0 / 2 pts  
Auto-graded

43. 8. Why vermicompost contains more NPK than Farm yard manure?

- a) N in FYM is lost during preparation and storage mainly as NH<sub>3</sub> volatilisation and or NO<sub>3</sub> leaching. ✓
- b) Vermicompost is made from organic waste alone
- c) Farm yard manure is directly used on plants
- d) Vermicompost contains earthworms also.

✓ Correct 2/2 Points

2 / 2 pts  
Auto-graded

44. 9. To which division does Mushroom belong?

- a) Basidiomycetes ✓
- b) Pteridophyta
- c) Thallophyta
- d) Mollusca

✗ Incorrect 0/2 Points

39. 4. In order to get more yield from his fields, a farmer is growing paddy crops over and over again using excess of fertilizer and pesticides. This practice will make the soil of his fields ...

- a) more useful for paddy crops only
- b) fertile for other crops also
- c) fit for ploughing and sowing seeds
- d) ultimately unfit for growing any crop ✓

✗ Incorrect 0/2 Points

40. 5. Is there any biological biocomposting method for waste degradation other than vermicomposting?

- Yes ✓
- No

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✗ Incorrect 0/2 Points

47. 12. Mushroom Farm Layout requires

- a) Composting unit
- b) Prewetting area
- c) Both ✓
- d) None of these

✗ Incorrect 0/2 Points

48. 13. Spawn is the \_\_\_\_\_ of Mushroom

- a) Spores
- b) Mycelium
- c) Fruit
- d) Both a and b ✓

Correct 2/2 Points

2 / 2 pts  
Auto-graded

Q14 Alternative name of Agaricus is

- a) Button mushroom ✓
- b) Paddy straw mushroom
- c) Oyster mushroom
- d) Dhingri mushroom

Correct 2/2 Points

2 / 2 pts  
Auto-graded

Q15 Mushrooms are good source of

- a) Carbohydrates
- b) Protein ✓
- c) Fats
- d) Vitamins

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~~Ally...~~  
Programme  
T. Shree  
Coordinator

P. Jeyaraj  
HOD / IST

VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING: EXTERNAL ASSESSMENT TEST 2022-23

Reproctor  
10 Anonymous

28:15  
Time to complete

47/60  
Points

1. Name \*  
2. Roll No \*  
3. Register No \*

Score / 0 pts

Score / 0 pts

Score / 0 pts

VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING: EXTERNAL ASSESSMENT TEST 2022-23

X Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

11. 6. Are most developing-country farmers engaged in subsistence or commercial production?

- a) Almost all are subsistence farmers.
- b) Very few engage in subsistence production, instead selling almost all of their produce on the market.
- c) Virtually all small-scale producers are engaged in some self-provisioning and market sales.
- d) 37% engage in pure subsistence production.

Correct 1/1 Points

1 / 1 pt  
Auto-graded

12. 7. How will climate change affect future food security?

- a) It will have negative impacts in most developing countries because of the increased frequency of droughts, storms and floods.
- b) The impact will be positive, because drier weather will mean less habitat for malaria mosquitoes, so fewer workers will be sick at harvest time.
- c) The impact will be positive because there will be more carbon dioxide available for plant photosynthesis.
- d) There currently is no scientific consensus as to whether climate change is occurring or whether it will over the next 50 years.

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VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING: EXTERNAL ASSESSMENT TEST 2022-23

Correct 1/1 Points

1 / 1 pt  
Auto-graded

7. 2. Green revolution is associated with which of the following?

- a) Sericulture
- b) Agriculture
- c) Aquaculture
- d) Vermiculture

Correct 1/1 Points

1 / 1 pt  
Auto-graded

8. 3. Vermicompost is used as a biofertilizer because it is rich in \_\_\_\_\_

- a) Calcium
- b) Nitrogen
- c) Phosphorus
- d) All of the above

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VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING: EXTERNAL ASSESSMENT TEST 2022-23

Correct 1/1 Points

1 / 1 pt  
Auto-graded

15. 10. In which method of disposal of municipal solid waste, the waste is dumped in the soil?

- a) Incineration
- b) Composting
- c) Land filling
- d) Shredding

Correct 1/1 Points

1 / 1 pt  
Auto-graded

16. 11. Which of the following is a biodegradable waste?

- a) Polythene bags
- b) Synthetic fiber
- c) Food waste
- d) Paper

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4. Class \*

Plant, Biotechnology

Score / 0 pts

5. Date \*

3/20/2023

Score / 0 pts

**PART A : 30 x 1 = 30 Marks**

Answer all questions

Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

6. 1. Which of the following is a commonly used earthworm species for the vermicomposting process?

- a) Eisenia fetida
- b) Perionix excavatus
- c) Both (a) and (b) ✓
- d) None of the above

Correct 1/1 Points

9. 4. Which layer of the atmosphere contains Ozone?

- a) Troposphere
- b) Stratosphere ✓
- c) Mesosphere
- d) Thermosphere

Correct 1/1 Points

10. 5. Why do you need to weigh your worms before putting them in your compost bin?

- a) to know how much to feed them ✓
- b) to know how many there are
- c) to see how much weight they are putting on
- d) to know what will be the end product

Correct 1/1 Points

1 / 1 pt  
Auto-graded

13. 8. What does it mean if your compost bin begins to smell?

- a) You have too much bedding and not enough soil
- b) You are feeding the worms too much. ✓
- c) You have too many worms in the bin
- d) You do not have enough feed in the bedding

Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

14. 9. Which of the following is not a major objective of Vermicomposting?

- a) To elevate the value of original material
- b) To accelerate the rate of degradation ✓
- c) To obtain toxic products ✓
- d) To obtain products free of any pollutants

Correct 1/1 Points

17. 12. The waste produced in cotton mills are

- a) Municipal solid waste
- b) Non biodegradable waste
- c) Hazardous waste
- d) Non-Hazardous waste ✓

Correct 1/1 Points

18. 13. All are true with respect to vermicomposting except

- a) improving soil aggregation,
- b) structure, and soil fertility,
- c) decreasing soil microbial population and enzymes. ✓
- d) improving moisture-holding capacity of soil

Correct 1/1 Points

1 / 1 pt  
Auto-graded

19. 14. Which of the following waste can be decomposed by bacteria?

- a) Radioactive substance
- b) Ashes
- c) Food waste ✓
- d) Rubbish

Correct 1/1 Points

1 / 1 pt  
Auto-graded

20. 15. If oxygen levels are high, anaerobic processes will take over and cause chemical reactions and strong odors that will stress or kill the worms

- True
- False ✓

Correct 1/1 Points

1 / 1 pt  
Auto-graded

23. 18. Which of the following resembles the rich topsoil in context to solid waste composting?

- a) Bed rock
- b) Humus ✓
- c) Sub soil
- d) Weathered rock

Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

24. 19. What is the carrier material widely used for spawn production?

- a) White sorghum ✓
- b) Wheat
- c) Rice
- d) Beans

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Correct 1/1 Points

1 / 1 pt  
Auto-graded

27. 22. What is the purpose of making holes in mushroom bed?

- a) to release heat
- b) to provide air circulation
- c) to make buds to come out
- d) all of the above ✓

Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

28. 23. Pre-treatment of the wastes by composting leads to greenhouse effect.

- a) True
- b) False ✓

Correct 1/1 Points

1 / 1 pt  
Auto-graded

31. 26. Mycelium embedded in gills are called as

- a) Stromma ✓
- b) Pilius
- c) Stipe
- d) Annulus

Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

32. 27. The fungus cell contains .....

- a) Protoplasm
- b) Cytoplasm
- c) Protoplasm including cytoplasm ✓
- d) None of the above

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✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

21. 16. What is the botanical name of oyster mushroom?

- a) Pleurotus ostreatus ✓
- b) Agaricus bisporus
- c) Lentinus edodes
- d) Pleurotus eryngii

✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

22. 17. Why burning waste is not an acceptable practice of solid waste management?

- a) Because it causes several environmental issues ✓
- b) Because it requires modern technologies
- c) Because it is very costly
- d) Because it requires lot of space

✓ Correct 1/1 Points

25. 20. Which of the following is an end product of anaerobic composting which is a source of energy?

- a) Toxic products
- b) Alcohol
- c) Amino acid
- d) Biogas ✓

✓ Correct 1/1 Points

26. 21. Which of the following is required to sterilize rice straw?

- a) Ethanol
- b) Formaldehyde ✓
- c) Phenol
- d) Dettol

✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

29. 24. Which of the following is not a part of mushroom?

- a) Pilius
- b) Stipe
- c) Annulus
- d) Sigma ✓

✗ Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

30. 25. Which of the following type of mushroom is widely cultivated?

- a) White button mushroom ✓
- b) Oyster mushroom
- c) Paddy straw mushroom
- d) Milky mushroom

✓ Correct 1/1 Points

33. 28. Where is National Research Centre for Mushroom located?

- a) Tamilnadu
- b) Kerala
- c) Delhi
- d) Himachal Pradesh ✓

✓ Correct 1/1 Points

34. 29. Mushroom cultivation is not useful in

- a) Biogas production
- b) Biological control prevention of crop diseases ✓
- c) Recycling of agriculture waste
- d) Treatment of cancer



3:24 PM

Correct 1/1 Points

1 / 1 pt  
Auto-graded

35. How to seed mushroom spawn in a bed?

- a) Middle of the bed as single layer
- b) Bottom of the bed as single layer
- c) Top of the bed as single layer
- d) Multiple layers from bottom to top

**PART B: 15 x 2 = 30 Marks**

Answer all questions

3:24 PM

Correct 2/2 Points

2 / 2 pts  
Auto-graded

41. Which epigenic earthworm species has high ability to tolerate environmental conditions like temperature, pH and moisture contents?

- a) Eisenia fetida
- b) Perionix excavatus
- c) Lumbricus terrestris
- d) Amythas mekongianus

Correct 2/2 Points

2 / 2 pts  
Auto-graded

42. During vermicomposting why is the pH of the substrate decreasing towards neutral pH?

- a) Due to addition of water
- b) Due to addition of earthworms
- c) Production of carbon dioxide and organic acids by microbial metabolism during decomposition
- d) Because of decrease in organic matter

3:20:23, 3:43 PM

Correct 2/2 Points

2 / 2 pts  
Auto-graded

37. Vermicompost is a manure prepared....?

- a) in factories
- b) from plants
- c) from dead animals
- d) by earthworms

Correct 2/2 Points

2 / 2 pts  
Auto-graded

38. Match the following:

- |                        |             |
|------------------------|-------------|
| (a) Mixed fertilizer   | 1. DAP      |
| (b) Complex fertilizer | 2. NPK      |
| (c) Biofertilizer      | 3. Oil Cake |
| (d) Organic fertilizer | 4. Algae    |

- a) (a) - 1; (b) - 2; (c) - 3; (d) - 4
- b) (a) - 2; (b) - 1; (c) - 4; (d) - 3
- c) (a) - 3; (b) - 2; (c) - 1; (d) - 4
- d) (a) - 4; (b) - 3; (c) - 2; (d) - 1

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3:20:23, 3:43 PM

Incorrect 0/2 Points

0 / 2 pts  
Auto-graded

45. 10. Mycelium produces white or colored umbrella shaped fruiting bodies called\_\_\_\_\_

- a) Hapthae
- b) Basidiocarp
- c) Annulus
- d) Seta

Correct 2/2 Points

2 / 2 pts  
Auto-graded

46. 11. What is a symptom of mushroom poisoning?

- a) Mild nausea
- b) Vomiting
- c) Diarrhea
- d) All of the Above

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2 / 2 pts  
Auto-graded

✓ Correct 2/2 Points

36. 1 Earthworms are considered friends of the farmers. Select from the following the correct reasons for the same:

- A. Earthworms eat the dead leaves and plants and their droppings fertilise the soil.
- B. Earthworms eat the weeds and save the main crop.
- C. Earthworms soften the soil by digging underneath.
- D. The tunnels made by the earthworms provide easy passage to air and water into the soil.

- a) B, C and D
- b) C, D and A ✓
- c) A and C only
- d) A, B and C

2 / 2 pts  
Auto-graded

✓ Correct 2/2 Points

43. 8 Why vermicompost contains more NPK than Farm yard manure?

- a) N in FYM is lost during preparation and storage mainly as NH3 volatilisation and or NO3 leaching ✓
- b) Vermicompost is made from organic waste alone
- c) Farm yard manure is directly used on plants
- d) Vermicompost contains earthworms also

✓ Correct 2/2 Points

44. 9. To which division does Mushroom belong?

- a) Basidiomycetes ✓
- b) Fungiophyta
- c) Thallophyta
- d) Mollusca

✓ Correct 2/2 Points

39. 4. In order to get more yield from his fields, a farmer is growing paddy crops over and over again using excess of fertilizer and pesticides. This practice will make the soil of his fields ....

- a) more useful for paddy crops only
- b) fertile for other crops also
- c) fit for ploughing and sowing seeds
- d) ultimately unfit for growing any crop ✓

✗ Incorrect 0/2 Points

40. 5. Is there any biological biocomposting method for waste degradation other than vermicomposting?

- Yes ✓
- No

✗ Incorrect 0/2 Points

47. 12. Mushroom Farm Layout requires

- a) Composting unit
- b) Prewetting area
- c) Both ✓
- d) None of these

✓ Correct 2/2 Points

48. 13. Spawn is the \_\_\_\_\_ of Mushroom

- a) Spores
- b) Mycelium
- c) Fruit
- d) Both a and b ✓



Correct 2/2 Points

2 / 2 pts  
Auto-graded

49. 14 Alternative name of Agaricus is

- a) Button mushroom ✓
- b) Paddy straw mushroom
- c) Oyster mushroom
- d) Dhingri mushroom

Correct 2/2 Points

2 / 2 pts  
Auto-graded

50. 15 Mushrooms are good source of

- a) Carbohydrates
- b) Protein ✓
- c) Fats
- d) Vitamins

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*[Signature]*  
 Programme Coordinator

*[Signature]*  
 HOD/RST

### REVIEW VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING EXTERNAL ASSESSMENT TEST 2022-23

Respondent: Anonymous  
Time to complete: 13:16  
Points: 44/60

- 1. Name \* Score / 0 pts
- 2. Roll No \* Score / 0 pts
- 3. Register No \* Score / 0 pts

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**X Incorrect** 0/1 Points 0 / 1 pt Auto-graded

11. 6. Are most developing-country farmers engaged in subsistence or commercial production?
- a) Almost all are subsistence farmers
  - b) Very few engage in subsistence production, instead selling almost all of their produce on the market
  - c) Virtually all small-scale producers are engaged in some self-provisioning and market sales
  - d) 37% engage in pure subsistence production

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

12. 7. How will climate change affect future food security?
- a) It will have negative impacts in most developing countries because of the increased frequency of droughts, storms and floods
  - b) The impact will be positive, because drier weather will mean less habitat for malaria mosquitoes, so fewer workers will be sick at harvest time
  - c) The impact will be positive because there will be more carbon dioxide available for plant photosynthesis
  - d) There currently is no scientific consensus as to whether climate change is occurring or whether it will over the next 50 years

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

7. 2. Green revolution is associated with which of the following?

- a) Senculture
- b) Agriculture
- c) Aquaculture
- d) Vermiculture

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

8. 3. Vermicompost is used as a biofertilizer because it is rich in \_\_\_\_\_.

- a) Calcium
- b) Nitrogen
- c) Phosphorus
- d) All of the above

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

15. 10. In which method of disposal of municipal solid waste, the waste is dumped in the soil?

- a) Incineration
- b) Composting
- c) Land filling
- d) Shredding

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

16. 11. Which of the following is a biodegradable waste?

- a) Polythene bags
- b) Synthetic fiber
- c) Food waste
- d) Paper

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Score / 0 pts

4. Class \*

Answer: Bachelors

Score / 0 pts

5. Date \*

4/26/2023

**PART A : 30 x 1 = 30 Marks**

Answer all questions

✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

6. 1. Which of the following is a commonly used earthworm species for the vermicomposting process?

- a) Eisenia fetida
- b) Perionix excavatus
- c) Both (a) and (b) ✓
- d) None of the above

✗ Incorrect 0/1 Points

9. 4. Which layer of the atmosphere contains Ozone?

- a) Troposphere
- b) Stratosphere ✓
- c) Mesosphere
- d) Thermosphere

✗ Incorrect 0/1 Points

10. 5. Why do you need to weigh your worms before putting them in your compost bin?

- a) to know how much to feed them ✓
- b) to know how many there are
- c) to see how much weight they are putting on
- d) to know what will be the end product

✗ Incorrect 0/1 Points

8 / 1 pt  
Auto-graded

13. 8. What does it mean if your compost bin begins to smell?

- a) You have too much bedding and not enough soil
- b) You are feeding the worms too much. ✓
- c) You have too many worms in the bin
- d) You do not have enough feed in the bedding

✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

14. 9. Which of the following is not a major objective of Vermicomposting?

- a) To elevate the value of original material
- b) To accelerate the rate of degradation
- c) To obtain toxic products. ✓
- d) To obtain products free of any pollutants

✓ Correct 1/1 Points

1  
Auto-graded

17. 12. The waste produced in cotton mills are

- a) Municipal solid waste
- b) Non biodegradable waste
- c) Hazardous waste
- d) Non-Hazardous waste. ✓

✓ Correct 1/1 Points

1  
Auto-graded

18. 13. All are true with respect to vermicomposting except

- a) improving soil aggregation.
- b) structure, and soil fertility.
- c) decreasing soil microbial population and enzymes. ✓
- d) improving moisture-holding capacity of soil



3/20/23, 3:43 PM  
1 / 1 pt  
Auto-graded

Correct 1/1 Points

23. 14. Which of the following waste can be decomposed by bacteria?

- a) Radioactive substance
- b) Ashes
- c) Food waste ✓
- d) Rubbish

1 / 1 pt  
Auto-graded

Correct 1/1 Points

23. 15. If oxygen levels are high, anaerobic processes will take over and cause chemical reactions and strong odors that will stress or kill the worms.

- a) True
- b) False ✓

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3/20/23, 3:43 PM VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING: EXTERNAL ASSESSMENT TEST 2022-23

Correct 1/1 Points

1 / 1 pt  
Auto-graded

23. 22. What is the purpose of making holes in mushroom bed?

- a) to release heat
- b) to provide air circulation
- c) to make buds to come out
- d) all of the above ✓

Correct 1/1 Points

1 / 1 pt  
Auto-graded

23. 23. Pre-treatment of the wastes by composting leads to greenhouse effect.

- a) True
- b) False ✓

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3/20/23, 3:43 PM VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING: EXTERNAL ASSESSMENT TEST 2022-23

Correct 1/1 Points

1 / 1 pt  
Auto-graded

23. 18. Which of the following resembles the rich topsoil in context to solid waste composting?

- a) Bed rock
- b) Humus ✓
- c) Sub soil
- d) Weathered rock

Correct 1/1 Points

1 / 1 pt  
Auto-graded

23. 19. What is the carrier material widely used for spawn production?

- a) White sorghum ✓
- b) Wheat
- c) Rice
- d) Beans

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Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

31. 26. Mycelium embedded in gills are called as

- a) Stromma ✓
- b) Pilus
- c) Stipe
- d) Annulus

Correct 1/1 Points

1 / 1 pt  
Auto-graded

32. 27. The fungus cell contains.....?

- a) Protoplasm
- b) Cytoplasm
- c) Protoplasm including cytoplasm ✓
- d) None of the above

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✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

21. 16. What is the botanical name of oyster mushroom?

- a) *Pleurotus ostreatus* ✓
- b) *Agaricus bisporus*
- c) *Leptinus edodes*
- d) *Pleurotus eryngii*

✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

22. 17. Why burning waste is not an acceptable practice of solid waste management?

- a) Because it causes several environmental issues ✓
- b) Because it requires modern technologies
- c) Because it is very costly
- d) Because it requires lot of space

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✗ Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

29. 24. Which of the following is not a part of mushroom?

- a) Pilius
- b) Stipe
- c) Annulus
- d) Stigma ✓

✗ Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

30. 25. Which of the following type of mushroom is widely cultivated?

- a) White button mushroom
- b) Oyster mushroom
- c) Paddy straw mushroom
- d) Milky mushroom ✓

✗ Incorrect 0/1 Points

25. 20. Which of the following is an end product of anaerobic composting which is a source of energy?

- a) Toxic products
- b) Alcohol
- c) Amino acid
- d) Biogas ✓

✗ Incorrect 0/1 Points

26. 21. Which of the following is required to sterilize rice straw?

- a) Ethanol
- b) Formaldehyde ✓
- c) Phenol
- d) Dettol

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✗ Incorrect 0/1 Points

0 / 1 pt  
Auto-graded

33. 28. Where is National Research Centre for Mushroom located?

- a) Tamilnadu
- b) Kerala
- c) Delhi
- d) Himachal Pradesh ✓

✓ Correct 1/1 Points

1 / 1 pt  
Auto-graded

34. 29. Mushroom cultivation is not useful in

- a) Biogas production
- b) Biological control prevention of crop diseases ✓
- c) Recycling of agriculture waste
- d) Treatment of cancer

Correct 1/1 Points

1 / 1 pt  
Auto-graded

36. How to seed mushroom spawn in a bed?

- a) Middle of the bed as single layer
- b) Bottom of the bed as single layer
- c) Top of the bed as single layer
- d) Multiple layers from bottom to top ✓

**PART B. 15 x 2 = 30 Marks**

Answer all questions

✓ Correct 2/2 Points

2 / 2 pts  
Auto-graded

37. Vermicompost is a manure prepared...?

- a) in factories
- b) from plants
- c) from dead animals
- d) by earthworms ✓

✓ Correct 2/2 Points

2 / 2 pts  
Auto-graded

38. Match the following:

- |                        |             |
|------------------------|-------------|
| (a) Mixed fertilizer   | 1. DAP      |
| (b) Complex fertilizer | 2. NPK      |
| (c) Biofertilizer      | 3. Oil Cake |
| (d) Organic fertilizer | 4. Algae    |

- a) (a) - 1, (b) - 2, (c) - 3, (d) - 4
- b) (a) - 2, (b) - 1, (c) - 4, (d) - 3 ✓
- c) (a) - 3, (b) - 2, (c) - 1, (d) - 4
- d) (a) - 4, (b) - 3, (c) - 2, (d) - 1

✓ Correct 2/2 Points

2 / 2 pts  
Auto-graded

41. Which epigenic earthworm species has high ability to tolerate environmental conditions like temperature, pH and moisture contents?

- a) Eisenia fetida ✓
- b) Perionix excavatus
- c) Lumbricus terrestris
- d) Amyntas mekongianus

✓ Correct 2/2 Points

2 / 2 pts  
Auto-graded

42. During vermicomposting why is the pH of the substrate decreasing towards neutral pH?

- a) Due to addition of water
- b) Due to addition of earthworms
- c) Production of carbon dioxide and organic acids by microbial metabolism during decomposition ✓
- d) because of decrease in organic matter

✗ Incorrect 0/2 Points

0 / 2 pts  
Auto-graded

45. Mycelium produces white or colored umbrella shaped fruiting bodies called\_\_\_\_\_

- a) Hapae
- b) Basidiocarp ✓
- c) Annulus
- d) Seta

✓ Correct 2/2 Points

2 / 2 pts  
Auto-graded

46. 11. What is a symptom of mushroom poisoning?

- a) Mild nausea
- b) Vomiting
- c) Diarrhea
- d) All of the Above ✓



✓ Correct 2/2 Points

36. 1. Earthworms are considered friends of the farmers. Select from the following the correct reasons for the same:

- A. Earthworms eat the dead leaves and plants and their droppings fertilise the soil.
- B. Earthworms eat the weeds and save the main crop.
- C. Earthworms soften the soil by digging underneath.
- D. The tunnels made by the earthworms provide easy passage to air and water into the soil.

- a) B, C and D
- b) C, D and A ✓
- c) A and C only
- d) A, B and C

✓ Correct 2/2 Points

39. 4. In order to get more yield from his fields, a farmer is growing paddy crops over and over again using excess of fertilizer and pesticides. This practice will make the soil of his fields ....

- a) more useful for paddy crops only
- b) fertile for other crops also
- c) fit for ploughing and sowing seeds
- d) ultimately unfit for growing any crop ✓

✓ Correct 2/2 Points

40. 5. Is there any biological biocomposting method for waste degradation other than vermicomposting?

- Yes ✓
- No

✗ Incorrect 0/2 Points

43. 8. Why vermicompost contains more NPK than Farm yard manure?

- a) N in FYM is lost during preparation and storage mainly as NH<sub>3</sub> volatilisation and or NO<sub>3</sub> leaching ✓
- b) Vermicompost is made from organic waste alone
- c) Farm yard manure is directly used on plants
- d) Vermicompost contains earthworms also.

✓ Correct 2/2 Points

44. 9. To which division does Mushroom belong?

- a) Basidiomycetes ✓
- b) Pteridophyta
- c) Thallophyta
- d) Mollusca

✓ Correct 2/2 Points

47. 12. Mushroom Farm Layout requires

- a) Composting unit
- b) Prewetting area
- c) Both ✓
- d) None of these

✗ Incorrect 0/2 Points

48. 13. Spawn is the \_\_\_\_\_ of Mushroom

- a) Spores
- b) Mycelium
- c) Fruit
- d) Both a and b ✓



Correct 2/2 Points

2 / 2 pts  
Auto-graded

14 Alternative name of Agaricus is

- a) Button mushroom ✓
- b) Paddy straw mushroom
- c) Oyster mushroom
- d) Dhingri mushroom

Correct 2/2 Points

2 / 2 pts  
Auto-graded

15 Mushrooms are good source of

- a) Carbohydrates
- b) Protein ✓
- c) Fats
- d) Vitamins

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*[Signature]*  
Programme Coordinator

*[Signature]*  
HOD /BJ

# VAP- MUSHROOM CULTIVATION AND VERMICOMPOSTING: EXTERNAL ASSESSMENT TEST 2022-23

43  
Responses

40.7  
Average Score

Active  
Status

1. Name (0 point)

43  
Responses

Latest Responses

"V. Bala priya"

"YAKGNA DEVI M"

"Priyanka S"

2 respondents (5%) answered **Fathima** for this question.

Arun Prasanth      BSabari raj dharsan k      KDivya Jothi ARi  
Sujitha R      Adarsiya J      **J Fathima S K**      MSasi Ba  
T Shamyuktha      Priyanka S      AFEMINA FATHIMA SHREE J      HARIKRIS  
vijayashree V      NANDHINI G      KSornamala Ramya



2. Roll No (0 point)

43  
Responses

Latest Responses

"21ubt026"

"920421UBT025"

"21ubt048"

2 respondents (5%) answered 21ubt034 for this question.

920421UBT036 21ubt006 21UBT019 21  
 21ubt023 21UBT004 21  
**21ubt034**  
 21UBT032 21ubt020 21ubt033 21UB  
 21ubt021 21ubt039 21UBT018 21UB  
 21UBT001 21ubt047 21UBT005 21ubt 21

3. Register No (0 point)

43  
Responses

Latest Responses

"920421214006"

"920421214048"

"920421214030"

1 respondents (2%) answered 920421214011 for this question.

920421214044 920421214028 920421214043 92042121400  
 920421214012 920421214034 920421214033 9204  
 920421214047 920421214011 920421214038  
 920421214008 920421214029 920421214036 9204212  
 920421214045 920421214042 920421214002  
 920421214014



3:40 PM

4. Class (0 point)

43  
Responses

Latest Responses  
 "B.tech Biotechnology"  
 "II YEAR BT"  
 "II year biotechnology "

15 respondents (35%) answered 2nd year for this question.

**BTech- Biotechnology**

second year  
 II year  
 BTEC biotechnology  
 2nd BT  
 bio technology  
 tech biotechnology  
**2nd year**  
 year Biotechnol  
 BTech Biotechno  
 yr biotechnology  
 nd yr  
 YEAR BT  
 2nd yr

5. Date (0 point)

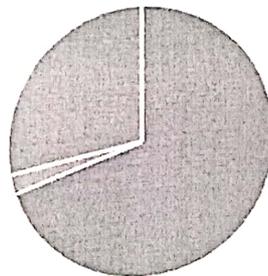
43  
Responses

Latest Responses  
 "2023-03-20"  
 "2023-03-20"  
 "2023-03-20"

6. 1. Which of the following is a commonly used earthworm species for the vermicomposting process? (1 point)

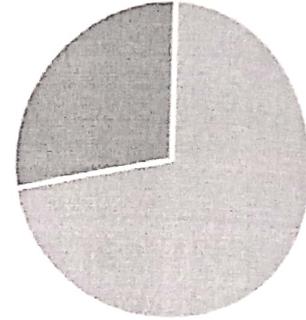
28% of respondents (12 of 43) answered this question correctly.

- a) Eisenia fetida 30
- b) Perionix excavatus 1
- c) Both (a) and (b) 12 ✓
- d) None of the above 0



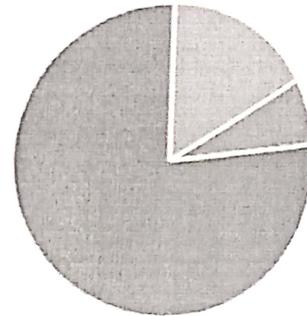
7. 2. Green revolution is associated with which of the following? (1 point)  
72% of respondents (31 of 43) answered this question correctly.

- a) Sericulture 0
- b) Agriculture 31 ✓
- c) Aquaculture 0
- d) Vermiculture 12



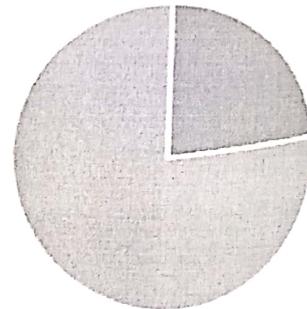
8. 3. Vermicompost is used as a biofertilizer because it is rich in \_\_\_\_\_. (1 point)  
77% of respondents (33 of 43) answered this question correctly.

- a) Calcium 0
- b) Nitrogen 7
- c) Phosphorus 3
- d) All of the above 33 ✓



9. 4. Which layer of the atmosphere contains Ozone? (1 point)  
77% of respondents (33 of 43) answered this question correctly.

- a) Troposphere 10
- b) Stratosphere 33 ✓
- c) Mesosphere 0
- d) Thermosphere 0

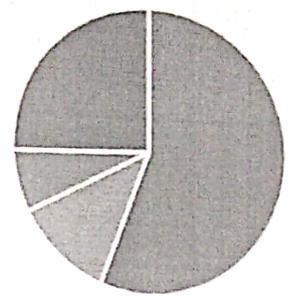


10. 5. Why do you need to weigh your worms before putting them in your compost bin?

(1 point)

56% of respondents (24 of 43) answered this question correctly.

- a) to know how much to feed th... 24 ✓
- b) to know how many there are 5
- c) to see how much weight they... 3
- d) to know what will be the end ... 11

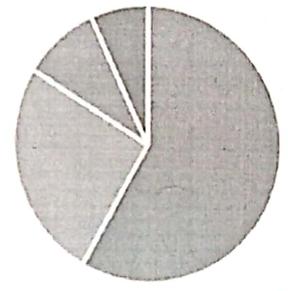


11. 6. Are most developing-country farmers engaged in subsistence or commercial production?

(1 point)

9% of respondents (4 of 43) answered this question correctly.

- a) Almost all are subsistence far... 25
- b) Very few engage in subsisten... 11
- c) Virtually all small-scale produ... 4 ✓
- d) 37% engage in pure subsiste... 3

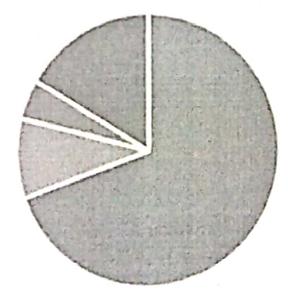


12. 7. How will climate change affect future food security? (1 point)

(1 point)

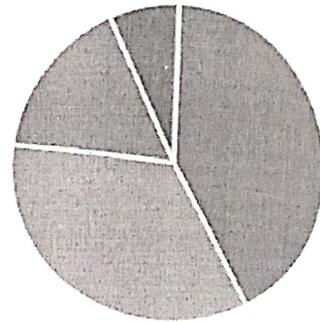
70% of respondents (30 of 43) answered this question correctly.

- a) It will have negative impacts i... 30 ✓
- b) The impact will be positive, b... 4
- c) The impact will be positive be... 2
- d) There currently is no scientific... 7



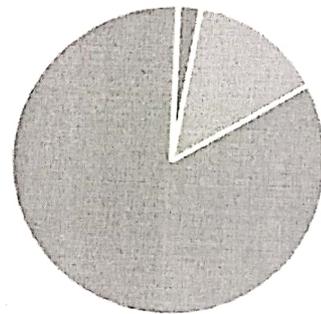
13. 8. What does it mean if your compost bin begins to smell? (1 point)  
35% of respondents (15 of 43) answered this question correctly.

- a) You have too much bedding ... 18
- b) You are feeding the worms to... 15 ✓
- c) You have too many worms in ... 7
- d) You do not have enough feed... 3



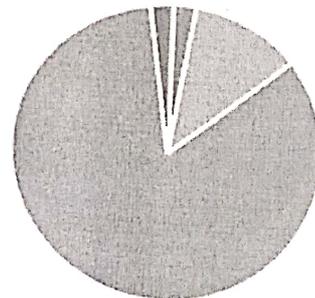
14. 9. Which of the following is not a major objective of Vermicomposting? (1 point)  
84% of respondents (36 of 43) answered this question correctly.

- a) To elevate the value of origin... 1
- b) To accelerate the rate of degr... 6
- c) To obtain toxic products 36 ✓
- d) To obtain products free of an... 0



15. 10. In which method of disposal of municipal solid waste, the waste is dumped (1 point)  
in the soil?  
84% of respondents (36 of 43) answered this question correctly.

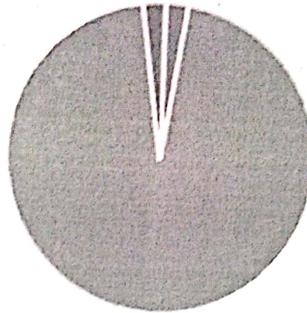
- a) Incineration 1
- b) Composting 5
- c) Land filing 36 ✓
- d) Shredding 1



11:34:00 PM

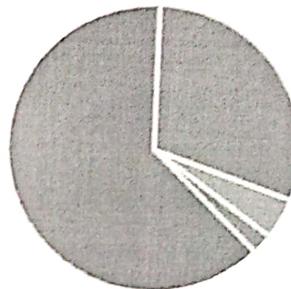
16. 11. Which of the following is a biodegradable waste? (1 point)  
 95% of respondents (41 of 43) answered this question correctly.

- a) Polythene bags 1
- b) Synthetic fiber 0
- c) Food waste 41 ✓
- d) Paper 1



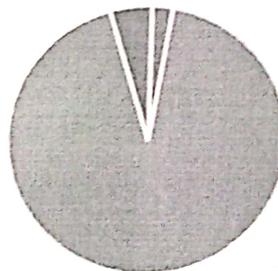
17. 12. The waste produced in cotton mills are ..... (1 point)  
 63% of respondents (27 of 43) answered this question correctly.

- a) Municipal solid waste 13
- b) Non biodegradable waste 2
- c) Hazardous waste 1
- d) Non-Hazardous waste 27 ✓



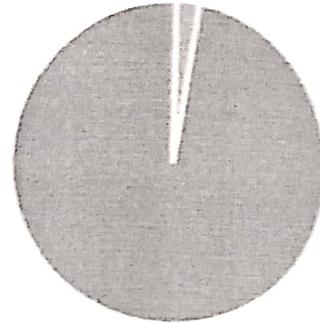
18. 13. All are true with respect to vermicomposting except (1 point)  
 93% of respondents (39 of 42) answered this question correctly.

- a) improving soil aggregation, 1
- b) structure, and soil fertility, 0
- c) decreasing soil microbial pop... 39 ✓
- d) improving moisture-holding ... 2



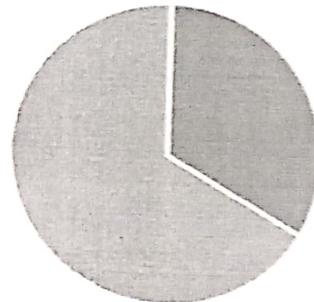
19. 14. Which of the following waste can be decomposed by bacteria? (1 point)  
98% of respondents (42 of 43) answered this question correctly.

- a) Radioactive substance 0
- b) Ashes 1
- c) Food waste 42 ✓
- d) Rubbish 0



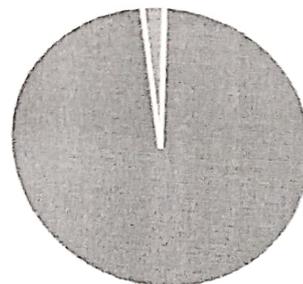
20. 15. If oxygen levels are high, anaerobic processes will take over and cause chemical reactions and strong odors that will stress or kill the worms. (1 point)  
67% of respondents (28 of 42) answered this question correctly.

- True 14
- False 28 ✓



21. 16. What is the botanical name of oyster mushroom? (1 point)  
98% of respondents (42 of 43) answered this question correctly.

- a) Pleurotus ostreatus 42 ✓
- b) Agaricus bisporus 1
- c) Lentinus edodes 0
- d) Pleurotus eryngii 0

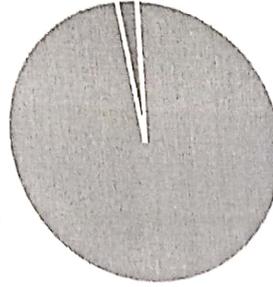


22. 17. Why burning waste is not an acceptable practice of solid waste management?

(1 point)

98% of respondents (42 of 43) answered this question correctly.

- a) Because it causes several envi... 42 ✓
- b) Because it requires modern t... 0
- c) Because it is very costly 0
- d) Because it requires lot of space 1

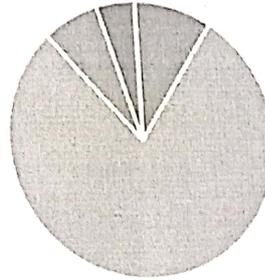


23. 18. Which of the following resembles the rich topsoil in context to solid waste composting?

(1 point)

79% of respondents (34 of 43) answered this question correctly.

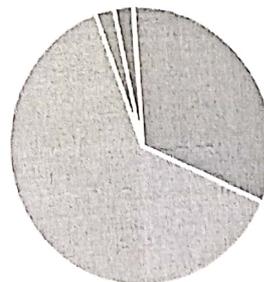
- a) Bed rock 4
- b) Humus 34 ✓
- c) Sub soil 3
- d) Weathered rock 2



24. 19. What is the carrier material widely used for spawn production? (1 point)

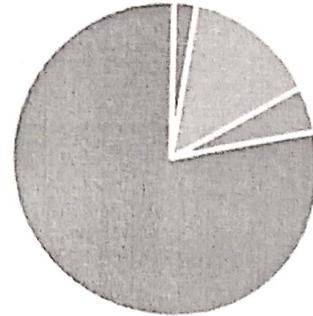
33% of respondents (14 of 43) answered this question correctly.

- a) White sorghum 14 ✓
- b) Wheat 27
- c) Rice 1
- d) Beans 1



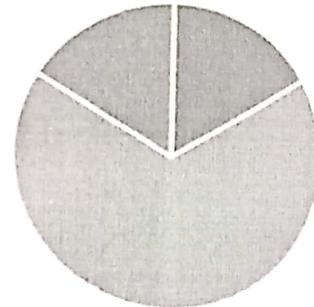
25. 20. Which of the following is an end product of anaerobic composting which is a source of energy? (1 point)  
79% of respondents (34 of 43) answered this question correctly.

- a) Toxic products 1
- b) Alcohol 6
- c) Amino acid 2
- d) Biogas 34 ✓



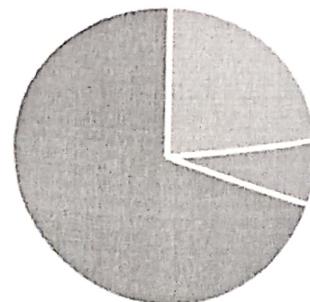
26. 21. Which of the following is required to sterilize rice straw? (1 point)  
67% of respondents (29 of 43) answered this question correctly.

- a) Ethanol 7
- b) Formaldehyde 29 ✓
- c) Phenol 7
- d) Dettol 0



27. 22. What is the purpose of making holes in mushroom bed? (1 point)  
70% of respondents (30 of 43) answered this question correctly.

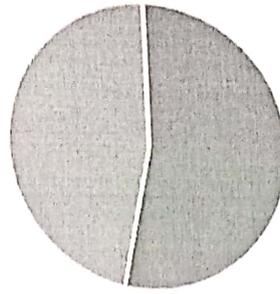
- a) to release heat 0
- b) to provide air circulation 10
- c) to make buds to come out 3
- d) all of the above 30 ✓



3:40 PM

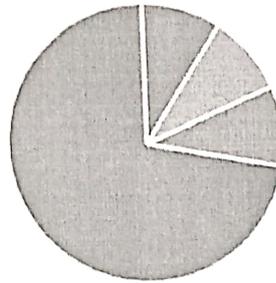
28. 23. Pre-treatment of the wastes by composting leads to greenhouse effect. (1 point)  
47% of respondents (20 of 43) answered this question correctly.

- a) True 23
- b) False 20 ✓



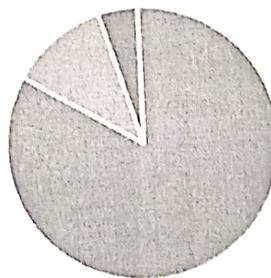
29. 24. Which of the following is not a part of mushroom? (1 point)  
72% of respondents (31 of 43) answered this question correctly.

- a) Pilus 4
- b) Stipe 4
- c) Annulus 4
- d) Stigma 31 ✓



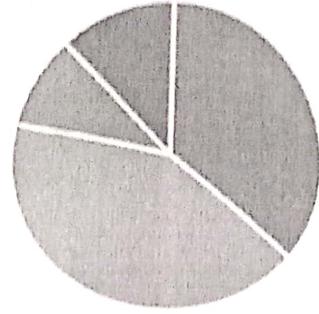
30. 25. Whish of the following type of mushroom is widely cultivated? (1 point)  
5% of respondents (2 of 43) answered this question correctly.

- a) White button mushroom 36
- b) Oyster mushroom 5
- c) Paddy straw mushroom 0
- d) Milky mushroom 2 ✓



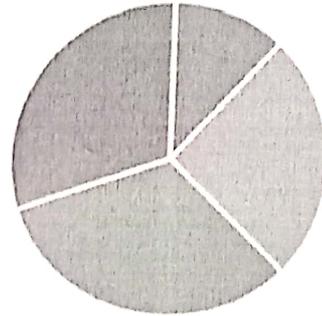
31. 26. Mycelium embedded in gills are called as (1 point)  
36% of respondents (15 of 42) answered this question correctly.

- a) Stromma 15 ✓
- b) Pilus 18
- c) Stipe 4
- d) Annulus 5



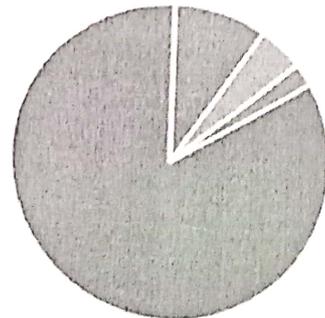
32. 27. The fungus cell contains.....? (1 point)  
33% of respondents (14 of 43) answered this question correctly.

- a) Protoplasm 5
- b) Cytoplasm 11
- c) Protoplasm including cytopla... 14 ✓
- d) None of the above 13



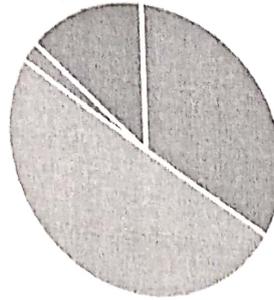
33. 28. Where is National Research Centre for Mushroom located? (1 point)  
84% of respondents (36 of 43) answered this question correctly.

- a) Tamilnadu 4
- b) Kerala 2
- c) Delhi 1
- d) Himachal Pradesh 36 ✓



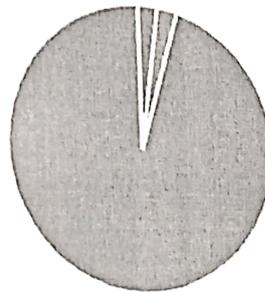
29. Mushroom cultivation is not useful in (1 point)  
50% of respondents (21 of 42) answered this question correctly.

- a) Biogas production 14
- b) Biological control prevention ... 21 ✓
- c) Recycling of agriculture waste 1
- d) Treatment of cancer 6



30. How to seed mushroom spawn in a bed? (1 point)  
95% of respondents (40 of 42) answered this question correctly.

- a) Middle of the bed as single la... 1
- b) Bottom of the bed as single l... 0
- c) Top of the bed as single layer 1
- d) Multiple layers from bottom t... 40 ✓

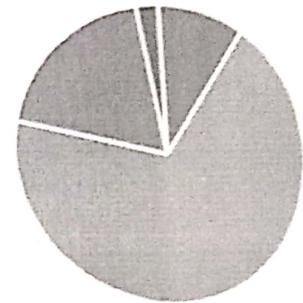


36. 1. Earthworms are considered friends of the farmers. Select from the following the correct reasons for the same: (2 points)

- A. Earthworms eat the dead leaves and plants and their droppings fertilise the soil.
- B. Earthworms eat the weeds and save the main crop.
- C. Earthworms soften the soil by digging underground.
- D. The tunnels made by the earthworms provide easy passage to air and water into the soil.

69% of respondents (29 of 42) answered this question correctly.

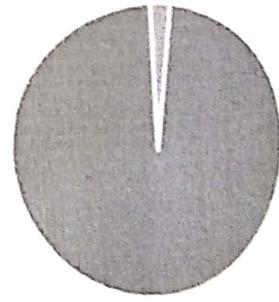
- a) B, C and D 4
- b) C, D and A 29 ✓
- c) A and C only 8
- d) A, B and C 1



37. 2. Vermicompost is a manure prepared....? (2 points)

98% of respondents (42 of 43) answered this question correctly.

- a) in factories 0
- b) from plants 1
- c) from dead animals 0
- d) by earthworms 42 ✓

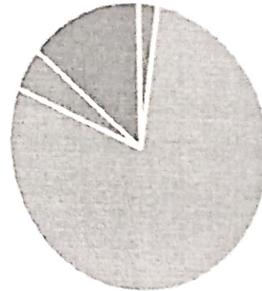


38. 3. Match the following: (2 points)

- |                        |             |
|------------------------|-------------|
| (a) Mixed fertilizer   | 1. DAP      |
| (b) Complex fertilizer | 2. NPK      |
| (c) Biofertilizer      | 3. Oil Cake |
| (d) Organic fertilizer | 4. Algae    |

79% of respondents (33 of 42) answered this question correctly.

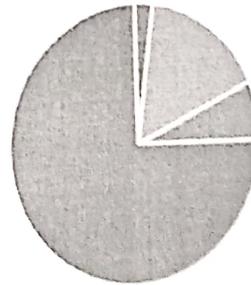
- a) (a) - 1; (b) - 2; (c) - 3; (d) - 4      1
- b) (a) - 2; (b) - 1; (c) - 4; (d) - 3      33 ✓
- c) (a) - 3; (b) - 2; (c) - 1; (d) - 4      2
- d) (a) - 4; (b) - 3; (c) - 2; (d) - 1      6



39. 4. In order to get more yield from his fields, a farmer is growing paddy crops over and over again using excess of fertilizer and pesticides. This practice will make the soil of his fields .... (2 points)

74% of respondents (32 of 43) answered this question correctly.

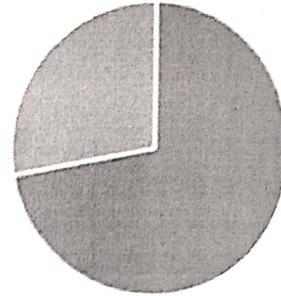
- a) more useful for paddy crops ...      1
- b) fertile for other crops also      7
- c) fit for ploughing and sowing ...      3
- d) ultimately unfit for growing a...      32 ✓



40. 5. Is there any biological biocomposting method for waste degradation other than vermicomposting? (2 points)

72% of respondents (31 of 43) answered this question correctly.

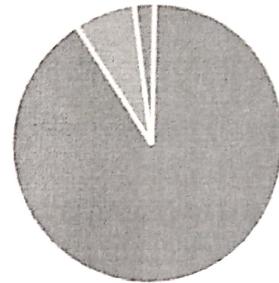
- Yes 31 ✓
- No 12



41. 6. Which epigenic earthworm species has high ability to tolerate environmental conditions like temperature, pH and moisture contents? (2 points)

91% of respondents (39 of 43) answered this question correctly.

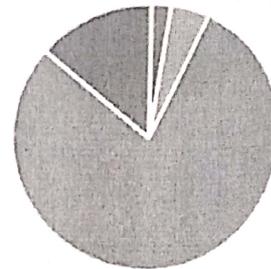
- a) Eisenia fetida 39 ✓
- b) Perionix excavatus 3
- c) Lumbricus terrestris 1
- d) Amynthus mekongianus 0



42. 7. During vermicomposting why is the pH of the substrate decreasing towards neutral pH? (2 points)

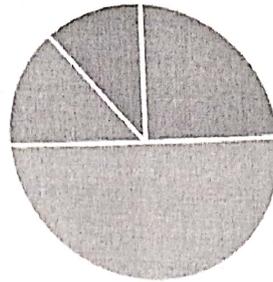
79% of respondents (34 of 43) answered this question correctly.

- a) Due to addition of water 1
- b) Due to addition of earthworms 2
- c) Production of carbon dioxide ... 34 ✓
- d) Because of decrease in organ... 6



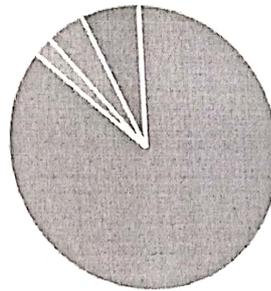
8. Why vermicompost contains more NPK than Farm yard manure? (2 points)  
 24% of respondents (10 of 42) answered this question correctly.

- a) N in FYM is lost during prepa... 10 ✓
- b) Vermicompost is made from ... 21
- c) Farm yard manure is directly ... 6
- d) Vermicompost contains earth... 5



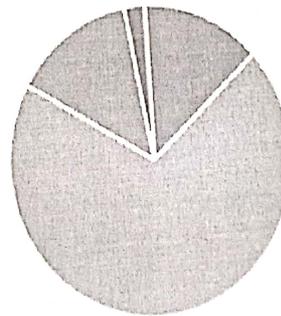
9. To which division does Mushroom belong? (2 points)  
 86% of respondents (37 of 43) answered this question correctly.

- a) Basidiomycetes 37 ✓
- b) Pteridophyta 1
- c) Thallophyta 2
- d) Mollusca 3



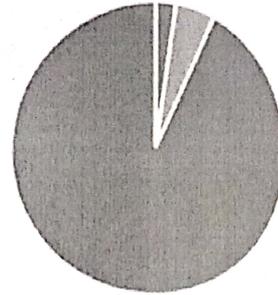
10. Mycellium produces white or colored umbrella shaped fruiting bodies called \_\_\_\_ (2 points)  
 70% of respondents (30 of 43) answered this question correctly.

- a) Haphae 6
- b) Basidiocarp 30 ✓
- c) Annalus 6
- d) Seta 1



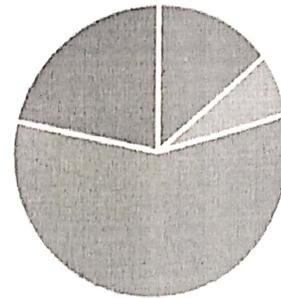
46. 11. What is a symptom of mushroom poisoning? (2 points)  
93% of respondents (40 of 43) answered this question correctly.

- a) Mild nausea 1
- b) Vomiting 2
- c) Diarrhea 0
- d) All of the Above 40 ✓



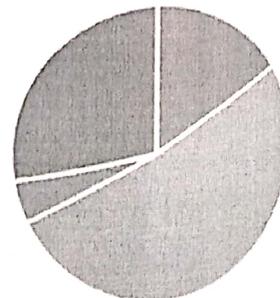
47. 12. Mushroom Farm Layout requires (2 points)  
57% of respondents (24 of 42) answered this question correctly.

- a) Composting unit 6
- b) Prewetting area 3
- c) Both 24 ✓
- d) None of these 9



48. 13. Spawn is the \_\_\_\_\_ of Mushroom (2 points)  
28% of respondents (12 of 43) answered this question correctly.

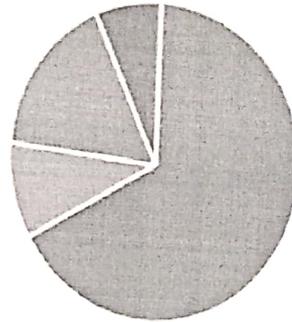
- a) Spores 7
- b) Mycellium 22
- c) Fruit 2
- d) Both a and b 12 ✓



49. 14. Alternative name of Agaricus is (2 points)

67% of respondents (28 of 42) answered this question correctly.

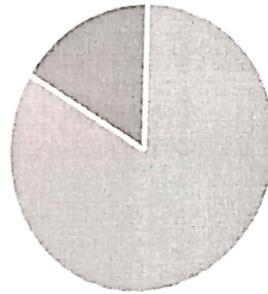
- a) Button mushroom 28 ✓
- b) Paddy straw mushroom 4
- c) Oyster mushroom 7
- d) Dhingri mushroom 3



50. 15. Mushrooms are good source of (2 points)

84% of respondents (36 of 43) answered this question correctly.

- a) Carbohydrates 0
- b) Protein 36 ✓
- c) Fats 0
- d) Vitamins 7



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 Program Coordinator

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 HOD / IST

Industry Certified Value Added Programme

on

**MUSHROOM CULTIVATION AND VERMICOMPOSTING**

05/01/2023 to 10/01/2023

Department: Biotechnology  
 Year: 2022-23

Regulation: R2021  
 Semester: Even

**MARK STATEMENT**

S.No.	Reg Number	R011 Number	Student Name	Internal Marks	External Marks	Final Marks
			Marks	40	60	100
1	920421214001	920421UBT016	ABINAYA.M	33	32	65
2	920421214002	920421UBT030	ADARSIYA.J	40	51	91
3	920421214003	920421UBT005	ANANTHA KANNAN.V	31	31	62
4	920421214004	920421UBT039	ANIS FATHIMA.S	38	47	85
5	920421214005	920421UBT002	ARUN PRASANTH.D	30	34	64
6	920421214006	920421UBT026	BALA PRIYA.V	34	32	66
7	920421214007	920421UBT009	BAVADHARSHINI.K	37	47	84
8	920421214008	920421UBT015	DEEPIKA.S	34	44	78
9	920421214009	920421UBT013	DHARSAN.K	35	38	73
10	920421214011	920421UBT004	DIVYA JOTHI.K	31	44	75
11	920421214012	920421UBT019	FEMINA FATHIMA.A	33	24	57
12	920421214013	920421UBT006	GAJALAKSHMI.K	33	33	66
13	920421214014	920421UBT036	HARI KRISHNAN.A.M	31	30	61
14	920421214015	920421UBT003	HARINI.M	32	45	77
15	920421214016	920421UBT011	HARINI.T	33	42	75
16	920421214017	920421UBT037	HARSHITHA.S	31	41	72
17	920421214019	920421UBT040	JAYASREE.A	34	48	82
18	920421214021	920421UBT044	KRISHA.K.S.	32	25	57
19	920421214022	920421UBT012	MADHUMITHA.S	36	36	72
20	920421214023	920421UBT042	MOHANA KANNAN.N	33	49	82
21	920421214024	920421UBT038	MUTHUGANESH.S	34	40	74
22	920421214025	920421UBT049	NANDHINI.G	37	48	85
23	920421214026	920421UBT017	NITHYA SHREE.J	35	56	91
24	920421214027	920421UBT021	POOJA.C	36	28	64
25	920421214028	920421UBT023	PRAVEEN.J	30	29	59
26	920421214029	920421UBT035	PRIYADHARSHINI.S	34	47	81
27	920421214030	920421UBT048	PRIYANGKA.S	36	39	75
28	920421214031	920421UBT047	RIDHU VARSHINI.T.S	32	45	77
29	920421214032	920421UBT046	RINITA JONELLIA.A	35	48	83
30	920421214033	920421UBT007	SABARI RAJ.B	30	33	63
31	920421214034	920421UBT031	SANMITAA.S	36	42	78

Industry Certified Value Added Programme

on

**MUSHROOM CULTIVATION AND VERMICOMPOSTING**

05/01/2023 to 10/01/2023

Department: Biotechnology  
 Year: 2022-23

Regulation: R2021  
 Semester: Even

**MARK STATEMENT**

No.	Reg Number	R0II Number	Student Name	Internal Marks	External Marks	Final Marks
32	920421214035	920421UBT001	SANTHOSH KAVERI.SR	32	46	78
33	920421214036	920421UBT033	SASI BALAN.M	33	43	76
34	920421214037	920421UBT027	SHALINI.S	31	39	70
35	920421214038	920421UBT008	SHAMYUKTHA.T	36	41	77
36	920421214040	920421UBT022	SORNAMALA RAMYA.K	31	39	70
37	920421214042	920421UBT020	SUBITHA.S	34	36	70
38	920421214043	920421UBT034	SUJA ULAGASHREE.K	35	44	79
39	920421214044	920421UBT032	SUJITHA.R	36	44	80
40	920421214045	920421UBT018	SWETHA.V	35	47	82
41	920421214046	920421UBT045	UDITH SARAN.N	30	39	69
42	920421214047	920421UBT029	VIJAYASHREE.V	35	44	79
43	920421214048	920421UBT025	YAKGNA DEVI.M	36	44	80
44	920421214049	920421UBT024	YOGA DHARSHAN.S	32	40	72

VAC Coordinators

Dr K.Geetha

Dr S.Karthikumar

Dr R.Shyam Kumar

HoD/BT

Dr R.Shyam Kumar

Dean (Academic Courses)

Industry Certified Value Added Programme

On

**MUSHROOM CULTIVATION AND VERMICOMPOSTING**

05/01/2023 to 10/01/2023

Department: Biotechnology

Regulation: R2021

Year: 2022-23

Semester: Even

**GRADE SHEET**

S.No.	Reg Number	Roll Number	Student Name	Report	Test	Internal Marks	External Marks	Total Marks
			Marks allotted	20	20	40	60	100
1	920421214001	920421UBT016	ABINAYA.M	16	17	33	32	65
2	920421214002	920421UBT030	ADARSIYA.J	18	22	40	51	91
3	920421214003	920421UBT005	ANANTHA KANNAN.V	17	14	31	31	62
4	920421214004	920421UBT039	ANIS FATHIMA.S	18	20	38	47	85
5	920421214005	920421UBT002	ARUN PRASANTH.D	15	15	30	34	64
6	920421214006	920421UBT026	BALA PRIYA.V	15	19	34	32	66
7	920421214007	920421UBT009	BAVADHARSHINI.K	18	19	37	47	84
8	920421214008	920421UBT015	DEEPIKA.S	16	18	34	44	78
9	920421214009	920421UBT013	DHARSAN.K	19	16	35	38	73
10	920421214011	920421UBT004	DIVYA JOTHI.K	18	13	31	44	75
11	920421214012	920421UBT019	FEMINA FATHIMA.A	16	17	33	24	57
12	920421214013	920421UBT006	GAJALAKSHMI.K	16	17	33	33	66
13	920421214014	920421UBT036	HARI KRISHNAN.A.M	17	14	31	30	61
14	920421214015	920421UBT003	HARINI.M	15	17	32	45	77
15	920421214016	920421UBT011	HARINI.T	16	17	33	42	75
16	920421214017	920421UBT037	HARSHITHA.S	16	15	31	41	72
17	920421214019	920421UBT04	JAYASREE.A	16	18	34	48	82
18	920421214021	920421UBT04	KRISHA.K.S.	16	16	32	25	57
19	920421214022	920421UBT01	MADHUMITHA.S	16	20	36	36	72
20	920421214023	920421UBT04	MOHANA KANNAN.N	17	16	33	49	82
21	920421214024	920421UBT03	MUTHUGANESH.S	17	17	34	40	74
22	920421214025	920421UBT04	NANDHINI.G	17	20	37	48	85
23	920421214026	920421UBT01	NITHYA SHREE.J	18	17	35	56	91
24	920421214027	920421UBT02	POOJA.C	16	20	36	28	64
25	920421214028	920421UBT02	PRAVEEN.J	16	14	30	29	59
26	920421214029	920421UBT03	PRIYADHARSHINI.S	17	17	34	47	81
27	920421214030	920421UBT04	PRIYANGKA.S	16	20	36	39	75
28	920421214031	920421UBT04	RIDHU VARSHINI.T.S	17	15	32	45	77
29	920421214032	920421UBT04	RINITA JONELLIA.A	16	19	35	48	83
30	920421214033	920421UBT00	SABARI RAJ.B	15	15	30	33	63
31	920421214034	920421UBT03	SANMITAA.S	16	20	36	42	78
32	920421214035	920421UBT00	SANTHOSH KAVERI.SR	15	17	32	46	78
33	920421214036	920421UBT00	SANTHOSH KAVERI.SR	17	16	33	43	76
34	920421214037	920421UBT03	SASI BALAN.M	15	16	31	39	70
35	920421214038	920421UBT02	SHALINI.S	17	19	36	41	77
			SHAMYUKTHA.T					

Industry Certified Value Added Programme  
 On

**MUSHROOM CULTIVATION AND VERMICOMPOSTING**

05/01/2023 to 10/01/2023

Department: Biotechnology

Regulation: R2021

Year: 2022-23

Semester: Even

36	920421214040	920421UBT02	SORNAMALA RAMYA.K	15	16	31	39	70
37	920421214042	920421UBT02	SUBITHA.S	18	16	34	36	70
38	920421214043	920421UBT03	SUJA ULAGASHREE.K	17	18	35	44	79
39	920421214044	920421UBT03	SUJITHA.R	16	20	36	44	80
40	920421214045	920421UBT01	SWETHA.V	17	18	35	47	82
41	920421214046	920421UBT04	UDITH SARAN.N	15	15	30	39	69
42	920421214047	920421UBT02	VIJAYASHREE.V	16	19	35	44	79
43	920421214048	920421UBT02	YAKGNA DEVI.M	18	18	36	44	80
44	920421214049	920421UBT02	YOGA DHARSHAN.S	15	17	32	40	72

VAC Coordinators

Dr K.Geetha

Dr S.Karthikumar

Dr R.Shyam Kumar

*R-shyam*  
 HoD/BT

Dr R.Shyam Kumar

DEPARTMENT OF BIOTECHNOLOGY  
Industry Certified Value Added Programme  
On  
MUSHROOM CULTIVATION AND VERMICOMPOSTING  
05/01/2023 to 10/01/2023

PRE- & POST- ASSESSMENT ANALYSIS REPORT

Total number of students: 44

Sl No	Questions	Pre-assessment	Post-assessment	Overall Improvement
		Average Rating		
1	I am familiar with the concept of Mushroom cultivation.	2.84	4.23	49 %
2	I can differentiate between various techniques used for seed preparation for mushroom cultivation.	2.35	4.11	75 %
3	I can prepare mushroom cultivation beds	2.07	4.41	113 %
4	I am clear with the different methods used for cultivation of different types of mushrooms.	2.35	4.11	75 %
5	I am aware of the process involved in harvesting and storage of mushrooms.	2.51	4.25	69 %
6	I am aware of the role of mushroom cultivation in small scale industry.	2.81	4.25	51 %
7	I know the importance of Vermicomposting.	3.72	4.34	17 %
8	I understand the principle behind vermicomposting technique.	3.21	4.18	30 %
9	I am aware of important types of vermicompost bed preparation.	2.93	4.00	37 %
10	I am aware of the advantages of vermicompost over chemical fertilizers.	3.47	4.14	19 %
11	I can explain the design and process of vermicomposting techniques.	2.74	4.18	53 %
12	I can design a small scale vermicompost production unit.	2.74	4.09	49 %

Pre-Assessment Survey: EXPECTATIONS

Q 13: MY EXPECTATIONS FROM THIS VALUE ADDED PROGRAMME ARE:  
RESPONSES FROM STUDENTS (Write atleast 2 points):

- To learn the technique for vermicompost
- To gain more knowledge about mushroom cultivation
- After this course, I can be a skilled person in mushroom cultivation process
- To understand mushroom cultivation and vermicompost production
- To gain knowledge about mushroom cultivation
- I expect it to be a course that increases my interest in mushroom cultivation. Hope it would be a fun filled learning experience.
- To be able to cultivate mushrooms on a large scale and to Understand the process and uses of vermicomposting.
- We can able to know about mushroom cultivation
- To know about vermicompost techniques
- Expecting than this program will provide with the depth knowledge of mushroom cultivation and vermicomposting.. Help us for oru startup ideas
- To know about mushroom cultivation
- TO KNOW ATLEAST ABOUT THE BASIC KNOWLEDGE ON MUSHROOM CULTIVATION AND THE USES IN MAKING IT AN INDUSTRY
- \*Learn more about Mushroom cultivation and vermicomposting
- I would want to understand the basics of mushroom cultivation, and would also want to learn advanced level concept
- Knowledge about mushroom cultivation
- I am looking forward to learn new skills
- I want to learn more about its process.
- I know more about the concept like cultivation of mushroom and vermicompost
- Expecting clear experience and to learn about these programs
- To know more information about vermicompost preparation, mushroom cultivation and its applications
- More creative and more field work
- My expectations from this value added programme is I want to gain knowledge about mushroom cultivation and vermicompost
- 1) This Value Added Program to learn How to cultivate the Mushroom
- Learn more about mushroom cultivation
- To study mushroom cultivation
- Learning Process of mushroom cultivation
- Knowledge in mushroom cultivation and vermicompost
- I want to get better knowledge about vermicompost and mushrooms
- To know about the topics clearly
- Know...some..extraa.knowledge from.. this
- To know about mushroom cultivation
- To know about vermicomposting and mushroom cultivationo
- To get a clear idea on both
- Do cultivation on my own
- Hands on experience and independent cultivation
- To prepare a proper mushroom cultivation bed by the end of the course

To be skilled in mushroom cultivation and vermicomposting  
It teach us from basis

To acquire knowledge. To know something new.

To know about mushroom cultivation and able to think broader

Learner about method of mushroom cultivation

I expect to learn the details and importance of mushroom cultivation and vermicomposting

I am expecting to make by myself both vermicomposting and mushroom as a product to invest

### Post-Assessment Survey: OUTCOMES

**Q 13: MY LEARNINGS FROM THIS VALUE ADDED PROGRAMME ARE (Write atleast 2 points):**

#### **RESPONSES FROM STUDENTS**

This program leads us to survive with our own business ideas using this cultivation

Mushroom cultivation and it's buisness aspects

Awareness about organic farming

About entrepreneurship and financial management on industrial basis

Learned about vermicompost and mushroom cultivation techniques

Good awareness about vermi compost and mushroom cultivation

HAD A GREAT APPROACH ON BOTH PROJECT WELL I CAN NOW CULTIVATE IN MY OWN HOUSE WITH LEAST INVESTMENT AND PROFIT

Understanding the importance and difficulties of small scale industries

Gained lot of ideas about mushroom cultivation

Know to make mushroom bed and vermicompost bed

Techniques and methods for vermicomposting and mushroom cultivation

We know mushroom cultivation and vermicomposting very well

New point of view and getting more information about mushrooms

I know how to develop vermicompost and mushroom cultivation

Industry management and money handling

Learned many technical and financial ideas on mushroom cultivation and vermicomposting

How to prepare vermicompost bed and its advantages, \*how to cultivate mushroom and various products that can be made from it

Gained some knowledge about mushroom cultivation and vermicomposting

Got a new point of you

Veray interesting

Vermicompost production skill

I have a knowledge to about cultivation of mushroom and vermi compost ing I can have a knowledge to start a small scale industry

It was an eye opener session.both the session mainly focused on the economy and it's management.

I would be able to set up an industry on my own in the future.My knowledge on these topics were enhanced.

Known about mushroom cultivation and vermicompost

Learned about vermicomposting & mushroom

Learned about mushroom cultivation and preparation clearly

I can prepare mushroom beds and vermicompost and made as a product

I got a new idea to do a business

Should implement in house or in large scale production.

Hands on training needed

Importance of vermi compost and the creating job opportunity by developing small scale industry

The knowledge about the process of both activities were clear

Informative and valuable

It was useful and I gained knowledge

Learnt about commercial importance of vermicomposting and mushroom cultivation

Now I good at practical works

I can do both vermicomposting and mushroom cultivating

Business development techniques

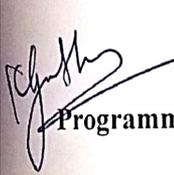
Learnt easy ways to prepare vermicompost. Learnt the process of cultivation of mushrooms

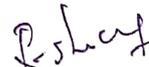
How to make my skills to a business

This have us to understand how out side the world customizing the products we learned that nnew technical method for future use also

A good experience

A good learning program

  
Programme Coordinators

  
HoD/BT

# pre-Assessment Survey: Industry Certified VAP on "Mushroom Cultivation and Vermicomposting

2022-23: PRE-ASSESSMENT SURVEY - NOT FOR QUANTITATIVE ASSESSMENT

\* Required

1. Roll Number \*

2. Name \*

3. Date \*

Please input date (M/d/yyyy)



4. 1) I am familiar with the concept of Mushroom cultivation. \*



5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation. \*



6. 3) I can prepare mushroom cultivation beds \*



7. 4) I am clear with the different methods used for cultivation of different types of mushrooms. \*



8. 5) I am aware of the process involved in harvesting and storage of mushrooms. \*



9. 6) I am aware of the role of mushroom cultivation in small scale industry. \*



10. 7) I know the importance of Vermicomposting. \*



11. 8) I understand the principle behind vermicomposting technique. \*



12. 9) I am aware of important types of vermicompost bed preparation. \*



13. 10) I am aware of the advantages of vermicompost over chemical fertilizers. \*



14. 11) I can explain the design and process of vermicomposting techniques. \*



15. 12) I can design a small scale vermicompost production unit. \*



16. 13) MY EXPECTATIONS FROM THIS VALUE ADDED PROGRAMME ARE: ( Give atleast two points) \*

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This content is neither created nor endorsed by Microsoft. The data you submit will be sent to the form owner.

Microsoft Forms

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Programme Coordinators

*[Handwritten signature]*  
HoD/ST

# Pre-Assessment Survey: Industry Certified VAP on Mushroom Cultivation and Vermicomposting

Reminder sent! You can send new reminder tomorrow.

Remind them

43  
Responses

02:52  
Average time to complete

Active  
Status

1. Roll Number

43  
Responses

Latest Responses

"920421ubt022"

"920421ubt021"

"21ubt023"

1 respondents (2%) answered 21ubt045 for this question.

21ubt020 21ubt037  
21UBT005 21UBT018 21ubt016 920421ubt04  
21UBT032 21ubt047 21ubt045 21UBT002 21ubt0  
21ubt038 920421ubt036 21ubt013 21ubt040 21ubt0  
ubt031 21ubt004



2. Name

43  
Responses

Latest Responses  
"K Sornamala Ramya"  
"C.Pooja "  
"Praveen.j"

4 respondents (9%) answered S for this question.

ARinita Jonellia	MSasi Balan	T Shamy
Ridhu Varshini	YogaDharshan S Moh	
Vijayashree V	Fathima S	Dharsan k
Bsabari raj	Priyanka S	AFEMINA FATH
	Divya jothiK	D Arun prasanth
	Anis	YAKGNA DE

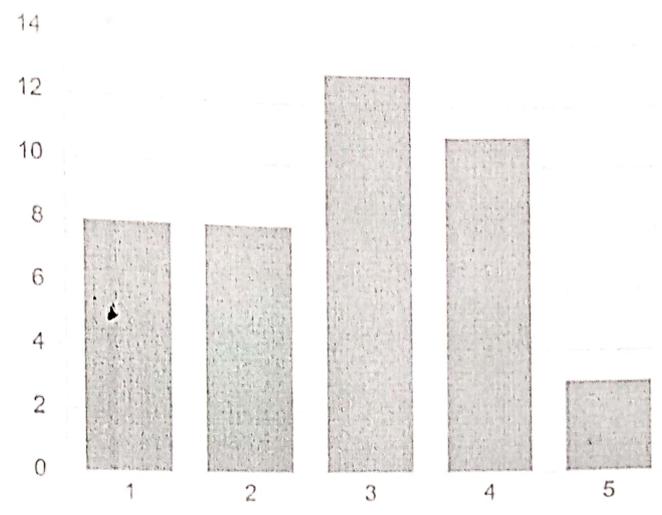
3. Date

43  
Responses

Latest Responses  
"2023-01-05"  
"2023-01-05"  
"2023-01-05"

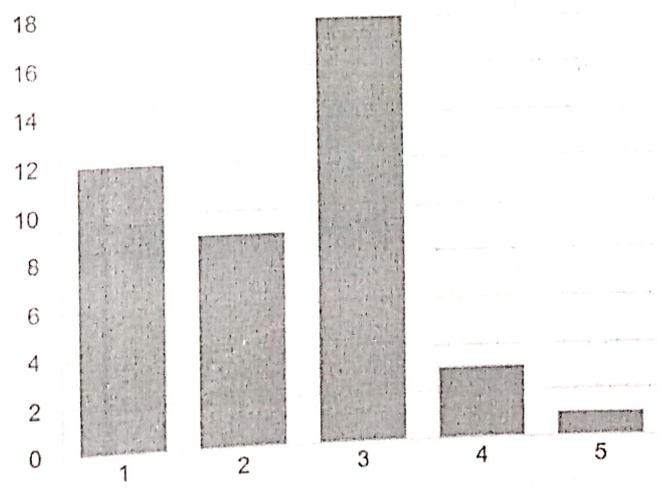
4. 1) I am familiar with the concept of Mushroom cultivation.

**2.84**  
Average Rating



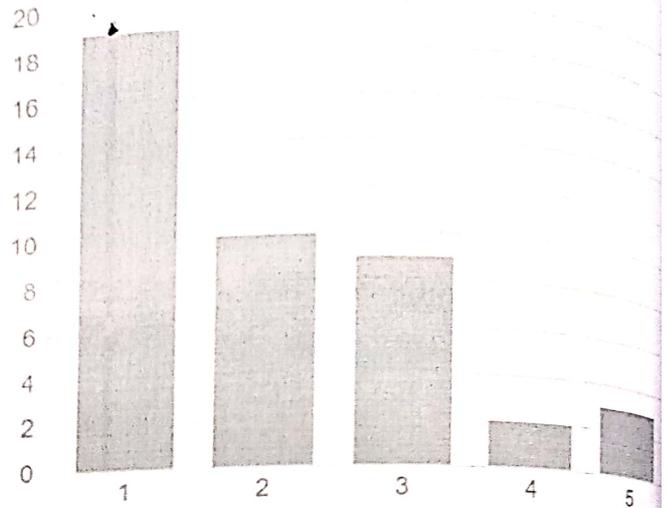
5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation.

**2.35**  
Average Rating



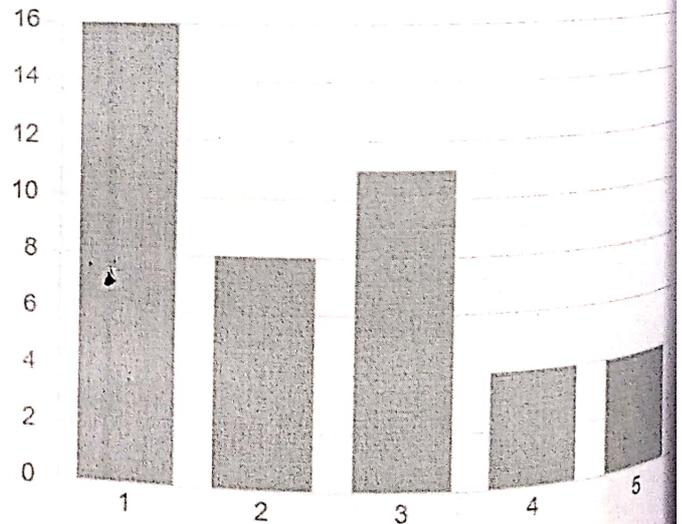
6. 3) I can prepare mushroom cultivation beds

2.07  
Average Rating



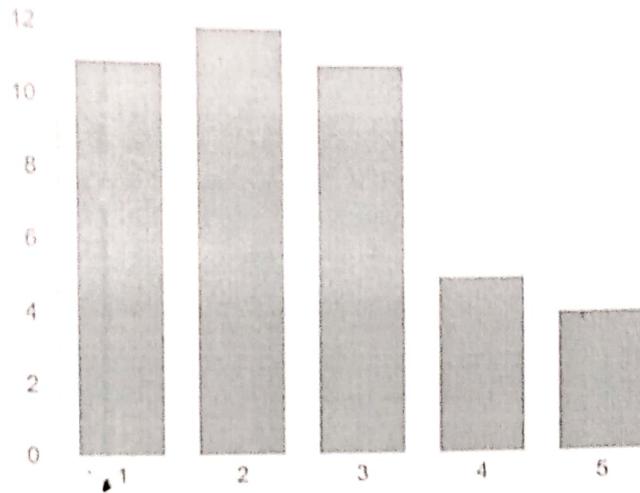
7. 4) I am clear with the different methods used for cultivation of different types of mushrooms.

2.35  
Average Rating



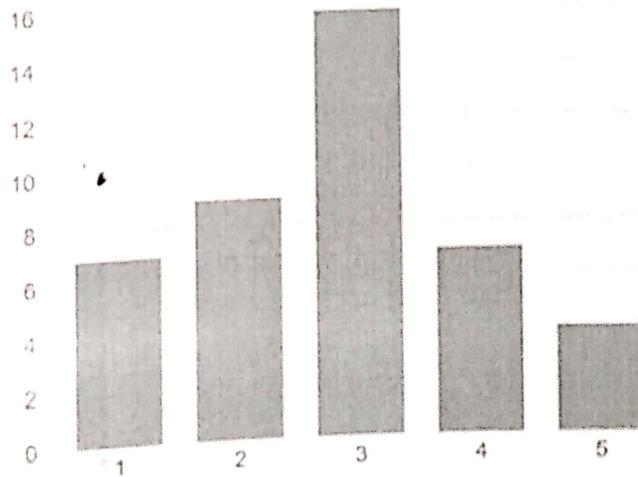
5) I am aware of the process involved in harvesting and storage of mushrooms.

2.51  
Average Rating



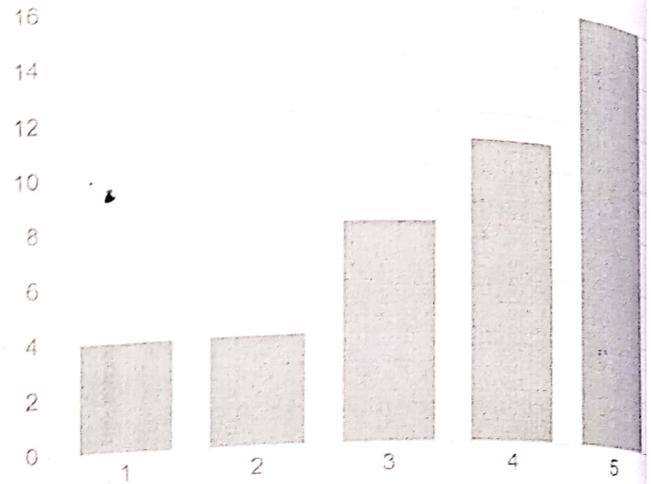
9. 6) I am aware of the role of mushroom cultivation in small scale industry.

2.81  
Average Rating



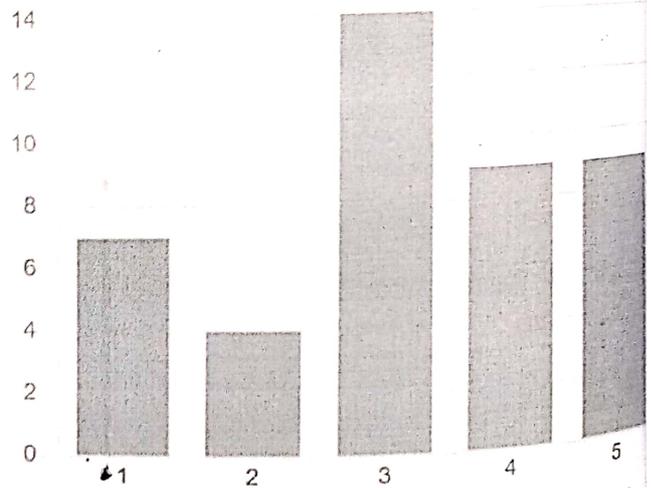
10. 7) I know the importance of Vermicomposting.

3.72  
Average Rating



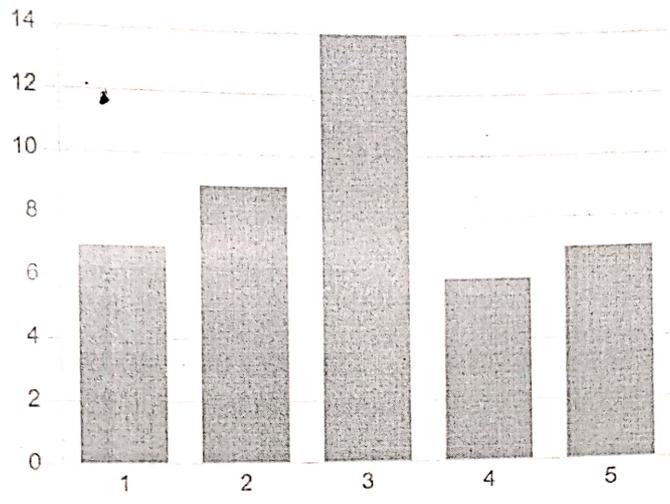
11. 8) I understand the principle behind vermicomposting technique.

3.21  
Average Rating



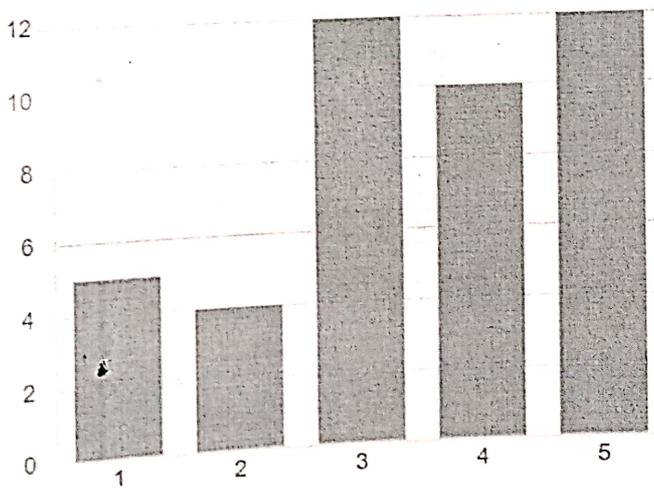
12. 9) I am aware of important types of vermicompost bed preparation.

2.93  
Average Rating



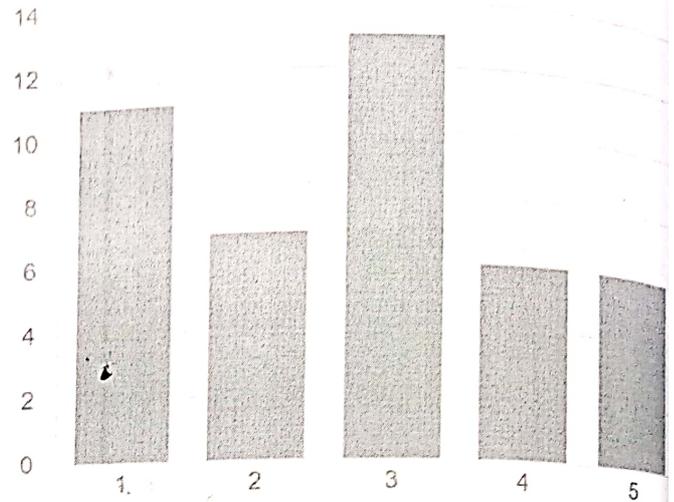
13. 10) I am aware of the advantages of vermicompost over chemical fertilizers.

3.47  
Average Rating



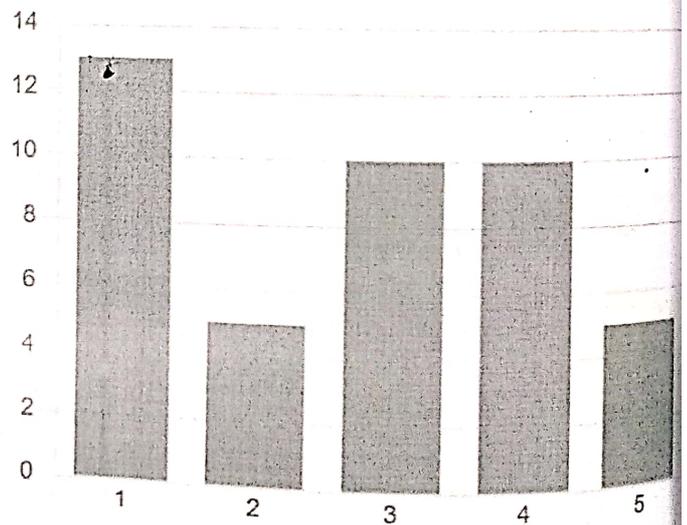
14. 11) I can explain the design and process of vermicomposting techniques.

**2.74**  
Average Rating



15. 12) I can design a small scale vermicompost production unit.

**2.74**  
Average Rating



13) MY EXPECTATIONS FROM THIS VALUE ADDED PROGRAMME ARE: ( Give atleast two points)

43 Responses

Latest Responses

"I am expecting to make by myself both vermicomposting and ...

"I expect to learn the details and importance of mushroom culti...

"Learner about method of mushroom cultivation "

43 respondents (53%) answered mushroom cultivation for this question.

cultivation and able      CULTIVATION AND THE USES      cultivation and its ap  
 course      cultivation of mushroom      vermicompist an  
 depth knowledge      **mushroom cultivation**      cultivatio  
 BASIC KNOWLEDGE           independ  
 cultivation process      program      vermicompost      knowledge  
 cultivation and vermicomposting      Mushroom cultivationand      mushroom cu  
 vermicompost preparation           better knowlec

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*[Handwritten signature]*

Programme Coordinators

*[Handwritten signature]*  
16/0/137

View results

Respondent

1

Anonymous

02:13

Time to complete

1. Roll Number \*

21ubt045

2. Name \*

Udith saran N

3. Date \*

6/13/2004



4. 1) I am familiar with the concept of Mushroom cultivation. \*



5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation. \*



6. 3) I can prepare mushroom cultivation beds \*



7. 4) I am clear with the different methods used for cultivation of different types of mushrooms. \*



8. 5) I am aware of the process involved in harvesting and storage of mushrooms. \*



9. 6) I am aware of the role of mushroom cultivation in small scale industry. \*



10. 7) I know the importance of Vermicomposting. \*



11. 8) I understand the principle behind vermicomposting technique. \*



54 AM  
12. 9) I am aware of important types of vermicompost bed preparation. \*



13. 10) I am aware of the advantages of vermicompost over chemical fertilizers. \*



14. 11) I can explain the design and process of vermicomposting techniques. \*



15. 12) I can design a small scale vermicompost production unit. \*



16. 13) MY EXPECTATIONS FROM THIS VALUE ADDED PROGRAMME ARE: (Give atleast two points) \*

To learn the technique for vermicompost

P. Shreef

ew results

Respondent

8

Anonymous

03:05

Time to complete

Roll Number \*

21ubt04

Name \*

Priyanka S

Date \*

1/4/2023



1) I am familiar with the concept of Mushroom cultivation. \*



5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation. \*



6. 3) I can prepare mushroom cultivation beds \*



7. 4) I am clear with the different methods used for cultivation of different types of mushrooms. \*



8. 5) I am aware of the process involved in harvesting and storage of mushrooms. \*



9. 6) I am aware of the role of mushroom cultivation in small scale industry. \*



10. 7) I know the importance of Vermicomposting. \*



11. 8) I understand the principle behind vermicomposting technique. \*



15 AM

12. 9) I am aware of important types of vermicompost bed preparation. \*



13. 10) I am aware of the advantages of vermicompost over chemical fertilizers. \*



14. 11) I can explain the design and process of vermicomposting techniques. \*



15. 12) I can design a small scale vermicompost production unit. \*



16. 13) MY EXPECTATIONS FROM THIS VALUE ADDED PROGRAMME ARE: (Give atleast two points) \*

We can able to know about mushroom cultivation

P. Shreef

View results

Respondent

16

Anonymous

03:43

Time to complete

Roll Number \*

920421ubt025

Name \*

YAKGNA DEVI M

Date \*

3/6/2002

1) I am familiar with the concept of Mushroom cultivation. \*



5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation. \*



6. 3) I can prepare mushroom cultivation beds \*



7. 4) I am clear with the different methods used for cultivation of different types of mushrooms. \*



8. 5) I am aware of the process involved in harvesting and storage of mushrooms. \*



9. 6) I am aware of the role of mushroom cultivation in small scale industry. \*



10. 7) I know the importance of Vermicomposting. \*



11. 8) I understand the principle behind vermicomposting technique. \*



12. 9) I am aware of important types of vermicompost bed preparation. \*



13. 10) I am aware of the advantages of vermicompost over chemical fertilizers. \*



14. 11) I can explain the design and process of vermicomposting techniques. \*



15. 12) I can design a small scale vermicompost production unit. \*



16. 13) MY EXPECTATIONS FROM THIS VALUE ADDED PROGRAMME ARE: (Give atleast two points) \*

I am looking forward to learn new skills

P. Shah

# Post-Assessment Survey: Industry Certified VAP on "Mushroom Cultivation & Vermicomposting"

2022-23: POST-ASSESSMENT SURVEY - NOT FOR QUANTITATIVE ASSESSMENT

\* Required

1. Roll Number \*

2. Name \*

3. Date \*



Please input date (M/d/yyyy)

4. 1) I am familiar with the concept of Mushroom cultivation. \*



5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation. \*



6. 3) I can prepare mushroom cultivation beds \*



7. 4) I am clear with the different methods used for cultivation of different types of mushrooms. \*



8. 5) I am aware of the process involved in harvesting and storage of mushrooms. \*



9. 6) I am aware of the role of mushroom cultivation in small scale industry. \*



10. 7) I know the importance of Vermicomposting. \*



11. 8) I understand the principle behind vermicomposting technique. \*



12. 9) I am aware of important types of vermicompost bed preparation. \*



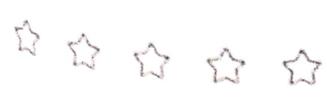
13. 10) I am aware of the advantages of vermicompost over chemical fertilizers. \*



14. 11) I can explain the design and process of vermicomposting techniques.



15. 12) I can design a small scale vermicompost production unit. \*



16. 13) LEARNING OUTCOMES FROM THIS VALUE ADDED PROGRAMME  
ARE: ( Give atleast two points) \*

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Programme Coordinators

HOD/IST

# Post-Assessment Survey: Industry Certified VAP on Mushroom Cultivation & Vermicomposting

Your response deadline is 1/17/2023. Send reminder to all of your recipients.

Remind them

44  
Responses

01:59  
Average time to complete

Active  
Status

1. Roll Number

44  
Responses

Latest Responses  
"920421ubt010"  
"920421ubt043"  
"21ubt049"

1 respondents (2%) answered 21ubt040 for this question.

- 21ubt006
- 21ubt003
- 21ubt034
- 21ubt048
- 21UBT002
- 21ubt001
- 21ubt024
- 21UBT019
- 21UBT017
- 21ubt040
- 21ubt045
- 21ubt0
- 21ubt020
- 21UBT005
- 920421ubt036
- 21ubt023
- 21ubt0
- 21ubt046

2. Name

44 Responses

Latest Responses

- "Sivaganesh "
- "Janasrithan "
- "NANDHINI G"

5 respondents (11%) answered S for this question.

AFEMINA FATHIMA NITHYA SHREE Arun Prasanth  
 K Bavadharshini Fathima S Priyanka S Dharsan k  
 T Shamyuktha Sujitha R K  
 Mohana Kannan YogaDharshan S Sanmitaa S Sat  
 KSornamala Ramya ARinita Jonellia KDivya jothi MSasi B

3. Date

44 Responses

Latest Responses

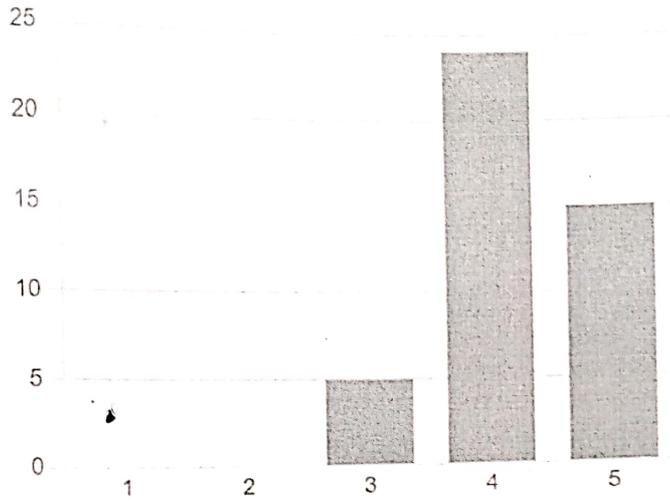
- "2003-08-15"
- "2003-07-14"
- "2023-01-11"



AM

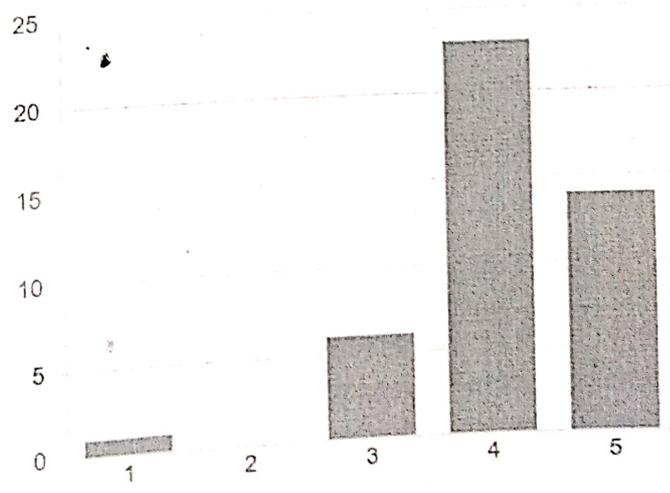
4. 1) I am familiar with the concept of Mushroom cultivation.

4.23  
Average Rating



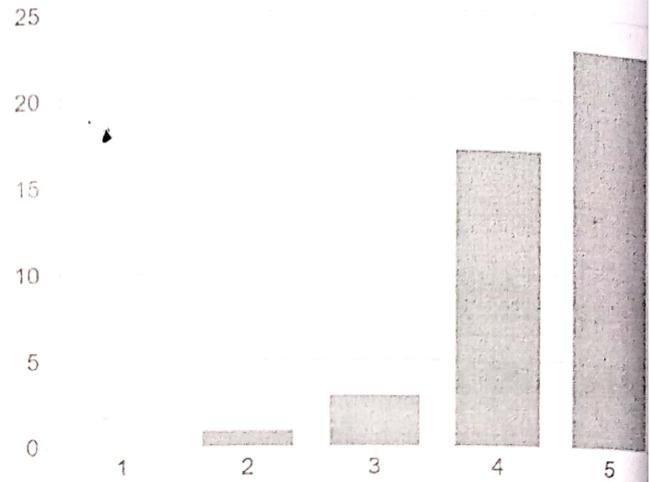
5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation.

4.11  
Average Rating



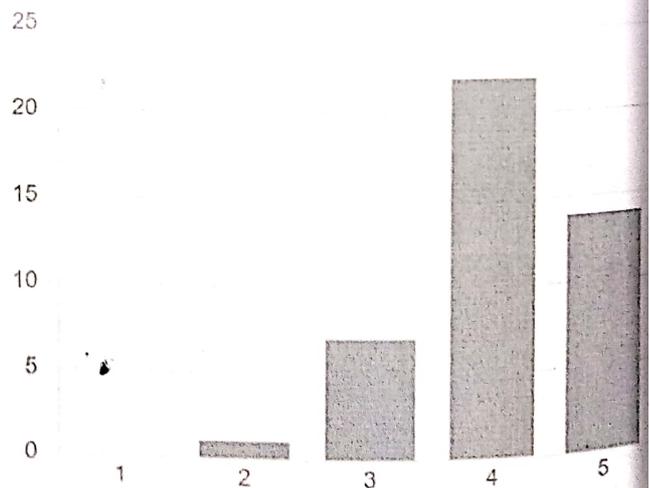
6. 3) I can prepare mushroom cultivation beds

**4.41**  
Average Rating



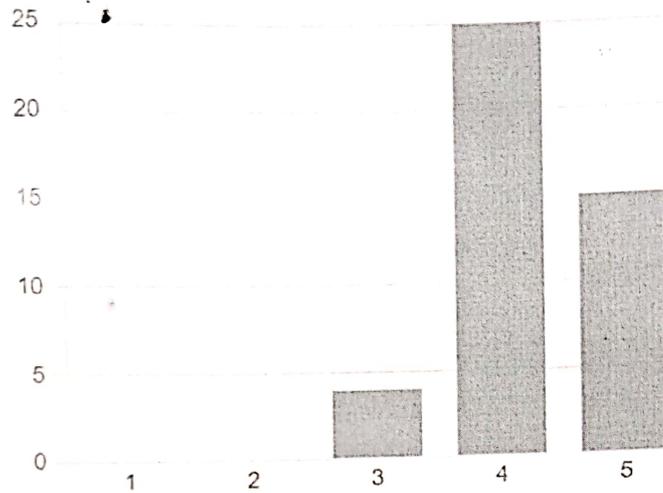
7. 4) I am clear with the different methods used for cultivation of different types of mushrooms.

**4.11**  
Average Rating



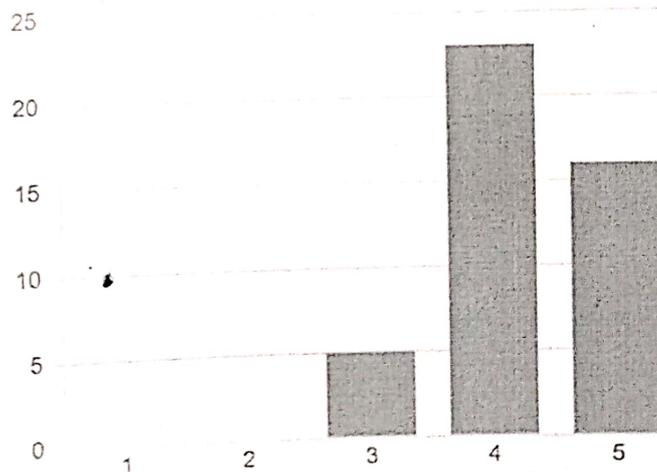
5) I am aware of the process involved in harvesting and storage of mushrooms.

4.25  
Average Rating



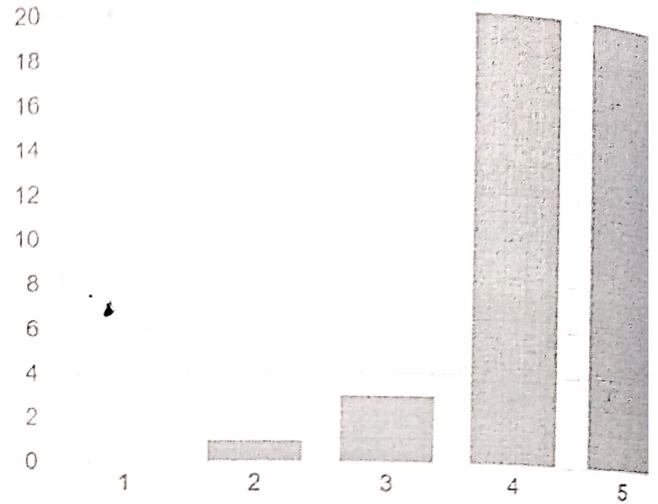
6) I am aware of the role of mushroom cultivation in small scale industry.

4.25  
Average Rating



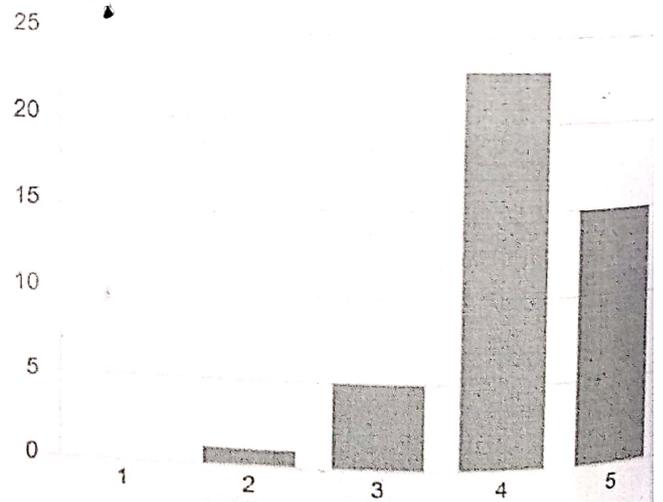
10. 7) I know the importance of Vermicomposting.

4.34  
Average Rating



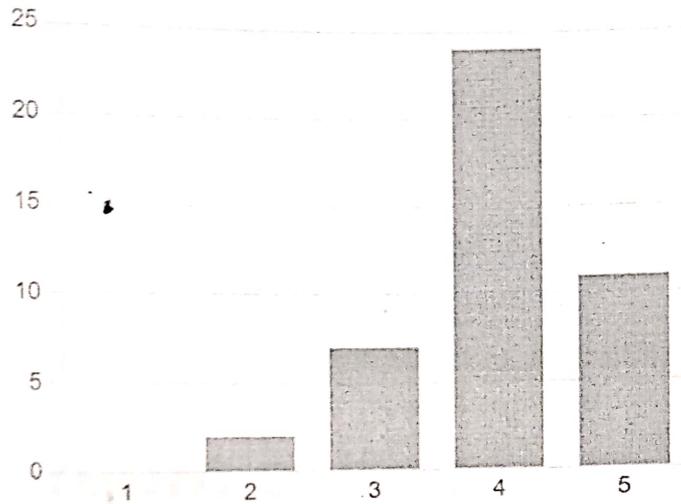
11. 8) I understand the principle behind vermicomposting technique.

4.18  
Average Rating



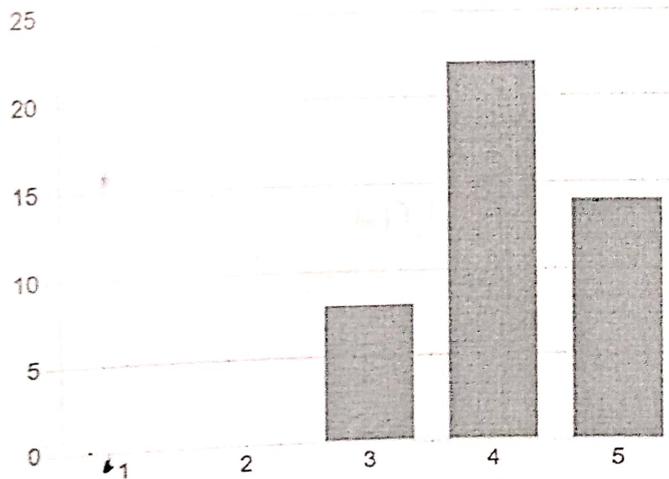
2. 9) I am aware of important types of vermicompost bed preparation.

4.00  
Average Rating



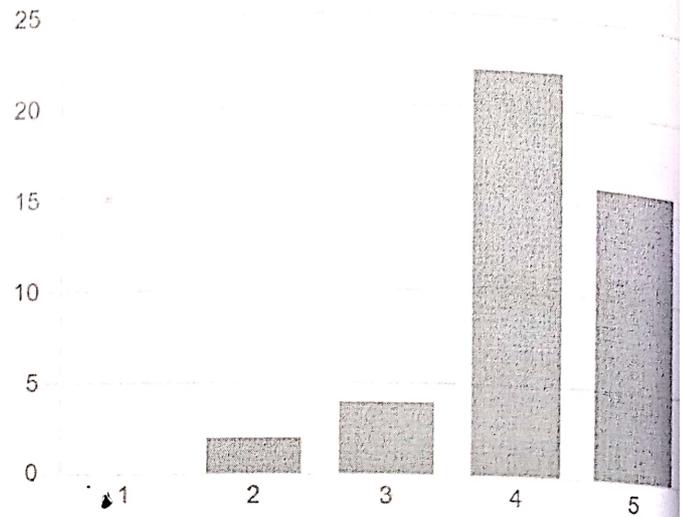
13. 10) I am aware of the advantages of vermicompost over chemical fertilizers.

4.14  
Average Rating



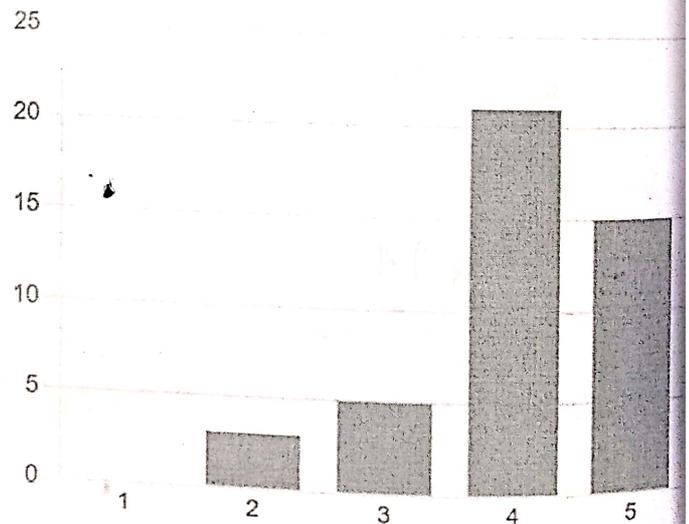
14. 11) I can explain the design and process of vermicomposting techniques.

**4.18**  
Average Rating



15. 12) I can design a small scale vermicompost production unit.

**4.09**  
Average Rating



16. 13) LEARNING OUTCOMES FROM THIS VALUE ADDED PROGRAMME ARE: ( Give atleast two points)

44  
Responses

Latest Responses  
"A good learning program "  
"A good experience "

"This have us to understand how out side the world customizin..."

12 respondents (27%) answered Mushroom cultivation for this question.

mushroom and various products    information about mushrooms  
 importance Good    business    vermi compost    scale it  
 technical method  
 process of cultivation    **Mushroom cultivation**    mushr  
 mushroom and vermi knowledge    small scale **vermicompost**    New  
 cultivation of mushroom    cultivation and preparation    vermicol  
 ideas using this

*[Handwritten signature]*

*[Handwritten signature]*

*[Handwritten signature]*

Programme Coordinators

*[Handwritten signature]*  
hbd/bs T

7 AM

### View results

Respondent

1 Anonymous

01:41

Time to complete

1. Roll Number \*

2. Name \*

3. Date \*

4. 1) I am familiar with the concept of Mushroom cultivation. \*



5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation. \*



6. 3) I can prepare mushroom cultivation beds \*



7. 4) I am clear with the different methods used for cultivation of different types of mushrooms. \*



8. 5) I am aware of the process involved in harvesting and storage of mushrooms. \*



9. 6) I am aware of the role of mushroom cultivation in small scale industry. \*



10. 7) I know the importance of Vermicomposting. \*



11. 8) I understand the principle behind vermicomposting technique. \*



12. 9) I am aware of important types of vermicompost bed preparation. \*



13. 10) I am aware of the advantages of vermicompost over chemical fertilizers. \*



14. 11) I can explain the design and process of vermicomposting techniques. \*

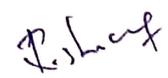


15. 12) I can design a small scale vermicompost production unit. \*



16. 13) **LEARNING OUTCOMES FROM THIS VALUE ADDED PROGRAMME ARE: ( Give atleast two points) \***

This program leads us to survive with our own business ideas using this cultivation





5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation. \*



6. 3) I can prepare mushroom cultivation beds \*



7. 4) I am clear with the different methods used for cultivation of different types of mushrooms. \*



8. 5) I am aware of the process involved in harvesting and storage of mushrooms. \*



9. 6) I am aware of the role of mushroom cultivation in small scale industry. \*



10. 7) I know the importance of Vermicomposting. \*



11. 8) I understand the principle behind vermicomposting technique. \*



9:37 AM

12. 9) I am aware of important types of vermicompost bed preparation. \*



13. 10) I am aware of the advantages of vermicompost over chemical fertilizers. \*



14. 11) I can explain the design and process of vermicomposting techniques. \*



15. 12) I can design a small scale vermicompost production unit. \*



16. 13) **LEARNING OUTCOMES FROM THIS VALUE ADDED PROGRAMME ARE: ( Give atleast two points) \***

Techniques and methods for vermicomposting and mushroom cultivation

View results

Respondent

23

Anonymous

01:37

Time to complete

1. Roll Number \*

2. Name \*

3. Date \*

1/10/2023



4. 1) I am familiar with the concept of Mushroom cultivation. \*



5. 2) I can differentiate between various techniques used for seed preparation for mushroom cultivation. \*



6. 3) I can prepare mushroom cultivation beds \*



7. 4) I am clear with the different methods used for cultivation of different types of mushrooms. \*



8. 5) I am aware of the process involved in harvesting and storage of mushrooms. \*



9. 6) I am aware of the role of mushroom cultivation in small scale industry. \*



10. 7) I know the importance of Vermicomposting. \*



11. 8) I understand the principle behind vermicomposting technique. \*



AM  
9) I am aware of important types of vermicompost bed preparation. \*



10) I am aware of the advantages of vermicompost over chemical fertilizers.



11) I can explain the design and process of vermicomposting techniques. \*



12) I can design a small scale vermicompost production unit. \*



6. 13) **LEARNING OUTCOMES FROM THIS VALUE ADDED PROGRAMME**  
**ARE: ( Give atleast two points) \***

It was an eye opener session.both the session mainly focused on the economy and it's management.

A handwritten signature in black ink.

A handwritten signature in black ink.

Richard

# FEEDBACK FORM: Industry Certified VAP on "Mushroom Cultivation and Vermicomposting 2022-23

The survey will take approximately 4 minutes to complete.  
Feedback on Various aspects of Value added programme

\* Required

1. Roll Number \*

2. Name \*

3. Date \*

Please input date (M/d/yyyy)



# Feedback on General aspects of Value Added Programme

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



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



6.3. The programme provided an insight to design solutions for environmental problems. \*



7.4. 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. \*



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



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



10. 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.

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



2. 9. Rate the infrastructure facilities provided to conduct the programme. \*



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



14. 11. Rate the Theory sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources. \*



15. 12. Rate the basic Hands-on sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources. \*



16. 13. Rate the Industrial training on Vermicomposting at JP Sustainable Foundation, Kulloorsandai, Virudhunagar. \*



17. 14. Rate the Industrial training on Mushroom cultivation by Mr R.Vijayakumar, Vcare Agro Tech Mushroom Farm, Mushroom Cultivation training centre, Madurai. \*



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



## Suggestions for Improvement

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

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

21. 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.



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*[Handwritten signature]*

*[Handwritten signature]*



2. Name

41  
Responses

Latest Responses

"Sujitha R "

"C.Pooja"

"M.Abinaya "

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

**S** Sujitha R Mohana Kannan ARinita Jonelli  
 KSornamala Ramya Sabari rajB Priyanka S Anis Fathima KDivya jothi  
 YogaDharshan S Fathima NITHYA SHREI  
 TSRidhu varshini Dharsan k Arun Prasanth AFEMINA FATHIMA  
 MSasi Balan YAKGNA DEVI

3. Date

41  
Responses

Latest Responses

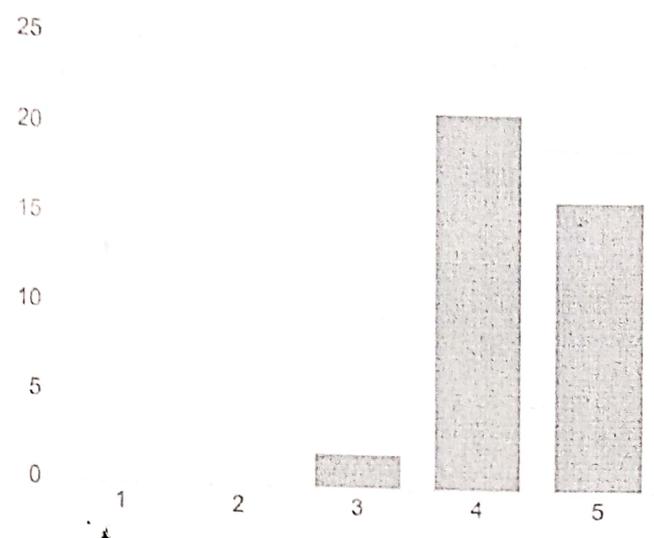
"2023-01-11"

"2004-03-19"

"2023-01-10"

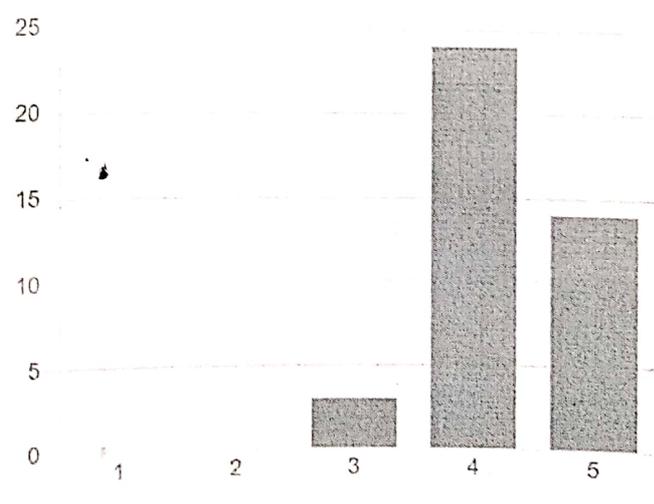
4. 1. The programme provided an insight to apply the knowledge gained for development of a small scale industry.

**4.37**  
Average Rating



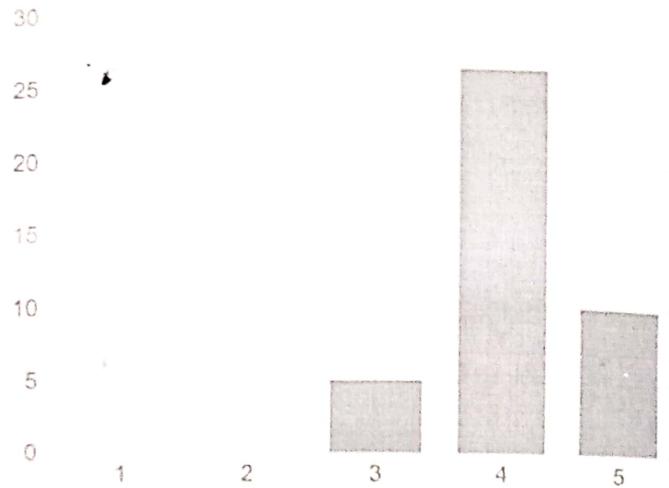
5. 2. The programme provided an insight to identify and analyze simple solutions for industrial applications

**4.27**  
Average Rating



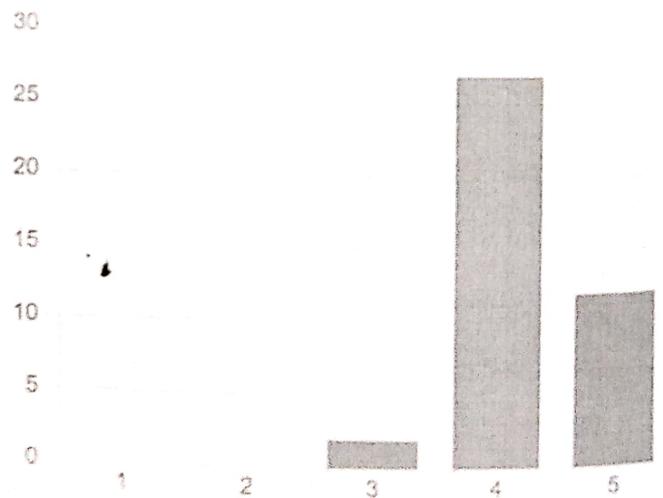
6. 3. The programme provided an insight to design solutions for environmental problems

4.12  
Average Rating



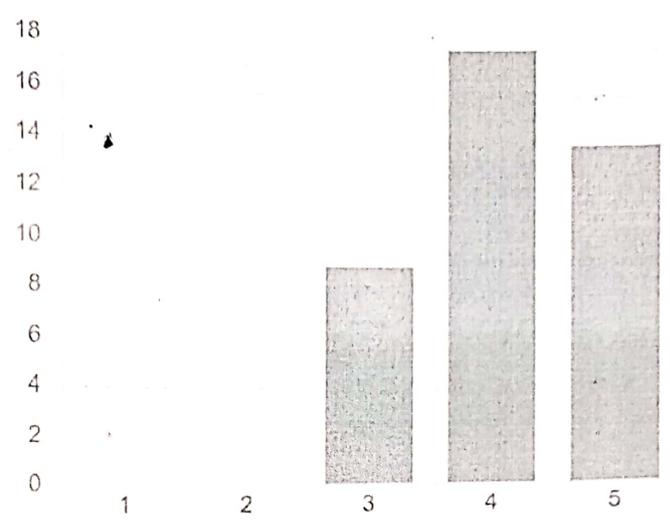
7. 4. The programme provided an insight to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data in various entrepreneurial ventures

4.24  
Average Rating



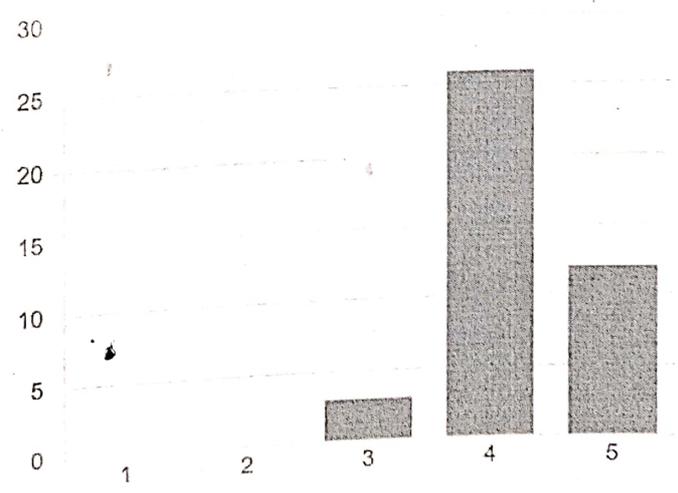
8. 5. The programme provided an insight to create, select, and apply appropriate techniques, resources, and modern engineering tools and software

4.12  
Average Rating



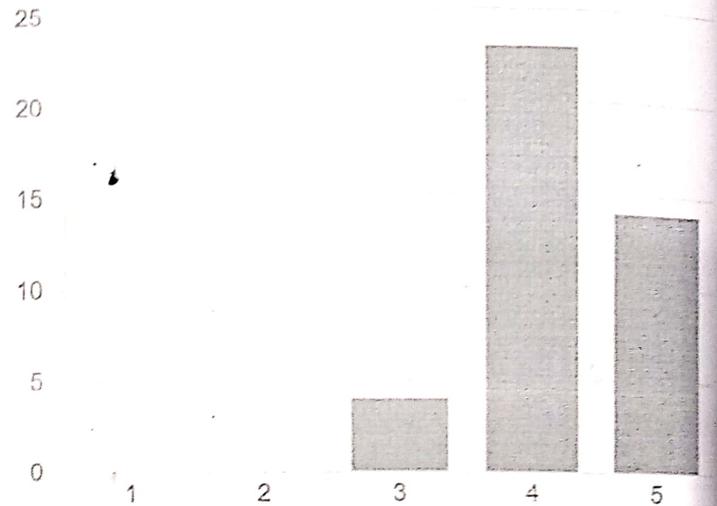
9. 6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings

4.22  
Average Rating



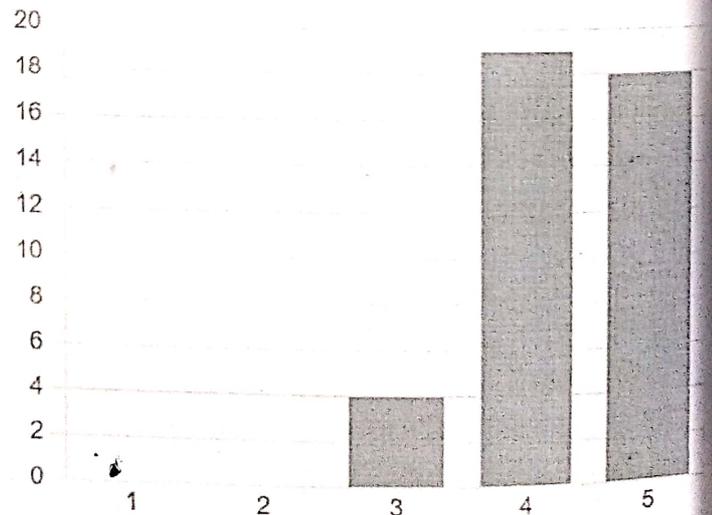
10. 7. The programme provided an insight to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broades context of technological change.

**4.24**  
Average Rating



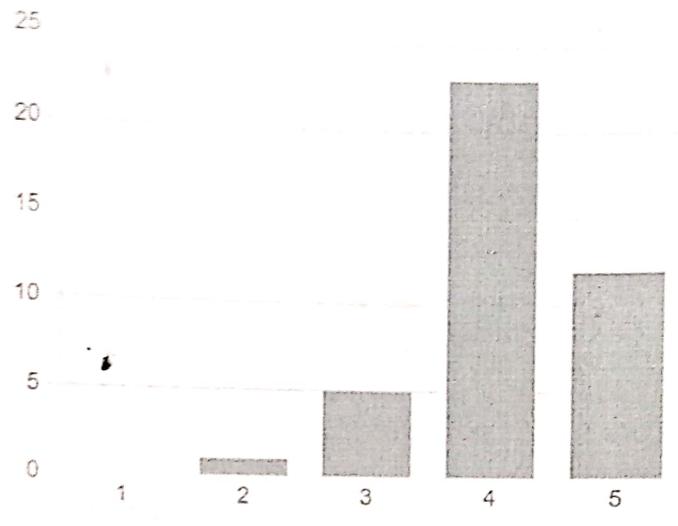
11. 8. Rate the course module and content of the Value added programme.

**4.34**  
Average Rating



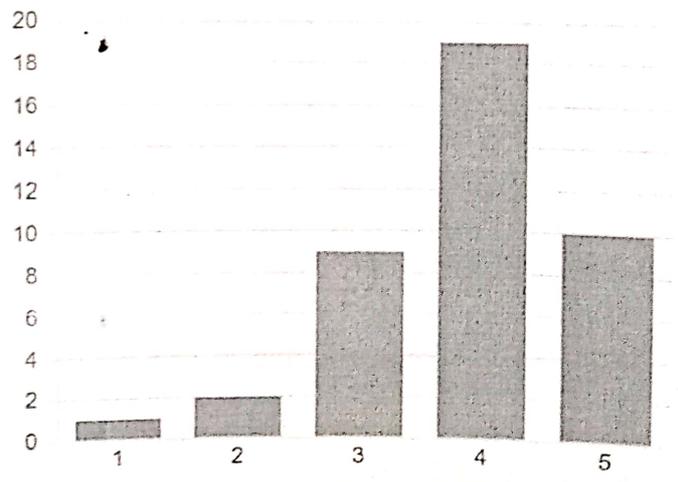
12. 9. Rate the infrastructure facilities provided to conduct the programme.

4.12  
Average Rating



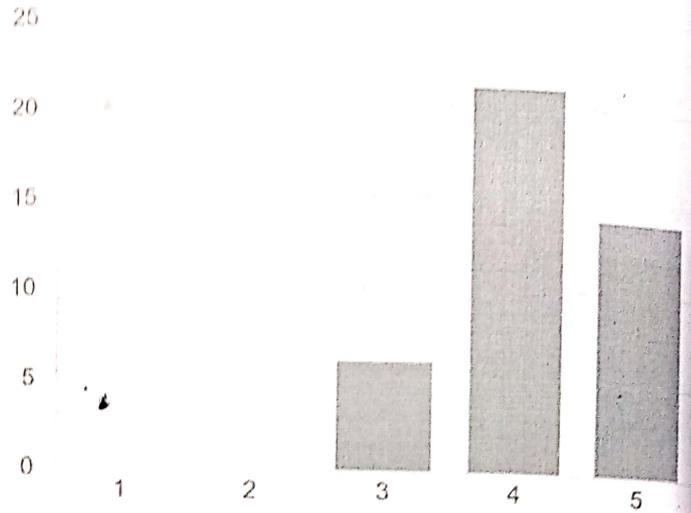
13. 10. The allotted time to complete the task given during the programme was sufficient

3.85  
Average Rating



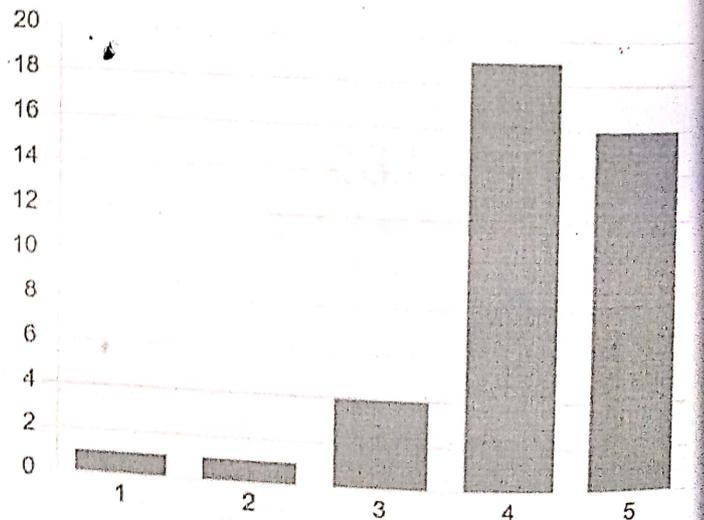
14. 11. Rate the Theory sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources.

4.20  
Average Rating



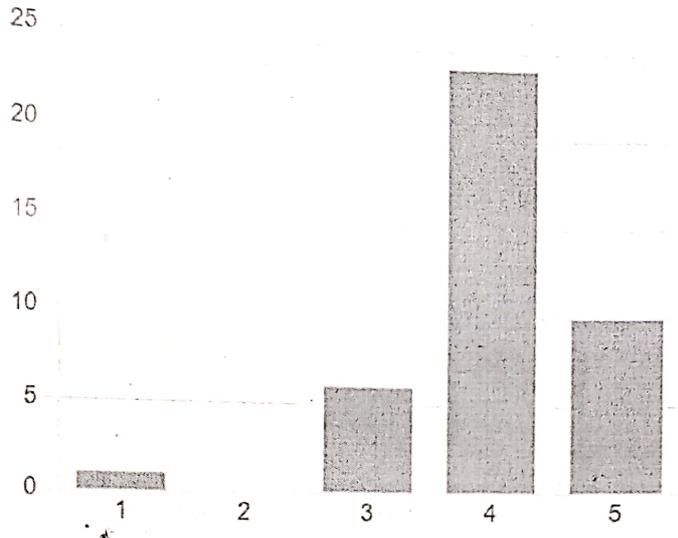
15. 12. Rate the basic Hands-on sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources.

4.17  
Average Rating



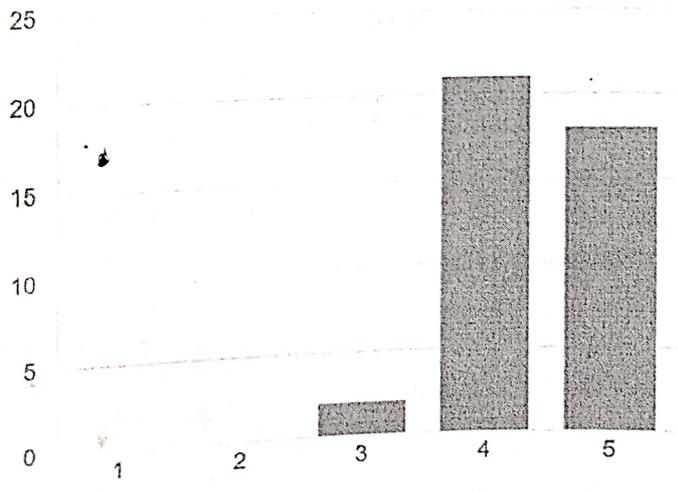
16. 13. Rate the Industrial training on Vermicomposting at JP Sustainable Foundation, Kulloorsandai, Virudhunagar.

4.02  
Average Rating



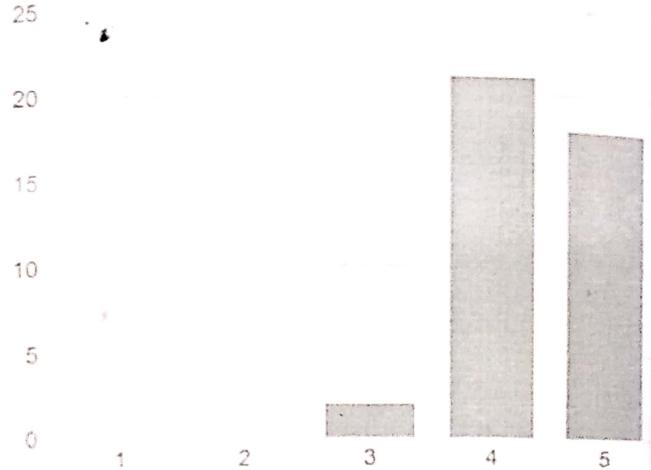
17. 14. Rate the Industrial training on Mushroom cultivation by Mr R.Vijayakumar, Vcare Agro Tech Mushroom Farm, Mushroom Cultivation training centre, Madurai.

4.39  
Average Rating



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

4.39  
Average Rating



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

41  
Responses

Latest Responses

- "Hands on training in mushroom cultivation and seeing the ver"
- "Learnt about mushroom cultivation in different forms "
- "Now I can teach to other about Mushroom cultivation "

8 respondents (20%) answered **Hands on training** for this question.



11:17 AM

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

41  
Responses

Latest Responses

- "The program can be a bit longer "
- "Need more field work than theory "
- "Mushroom cultivation area Visiting "

5 respondents (12%) answered **hands on training** for this question.



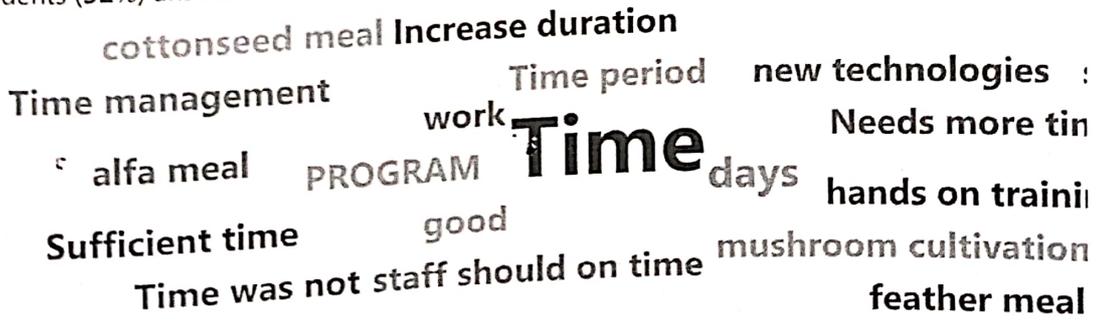
21. 18. Please give your valuable suggestions for the improvement of the programme.

41  
Responses

Latest Responses

- "Overall the program was good. The time can be a bit longer "
- "Time and field work can be increased "
- "Hands on session teach as more knowledge so gave hands on t..."

13 respondents (32%) answered **Time** for this question.



### View results

Respondent

1      Anonymous

02:28

Time to complete

1. Roll Number \*

2. Name \*

3. Date \*

1/10/2023



## Feedback on General aspects of Value Added Programme

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



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



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



7. 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 \*



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



11.7 AM  
9.6. The programme provided an insight to effectively function as an individual, and as a member in teams in multidisciplinary settings \*



10.7. 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.

11.8. Rate the course module and content of the Value added programme. \*



12.9. Rate the infrastructure facilities provided to conduct the programme. \*



13.10. The allotted time to complete the task given during the programme was sufficient \*



14. 11. Rate the Theory sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources. \*



15. 12. Rate the basic Hands-on sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources. \*



16. 13. Rate the Industrial training on Vermicomposting at JP Sustainable Foundation, Kulloorsandai, Virudhunagar. \*



17. 14. Rate the Industrial training on Mushroom cultivation by Mr R.Vijayakumar, Vcare Agro Tech Mushroom Farm, Mushroom Cultivation training centre, Madurai. \*



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



### Suggestions for Improvement

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

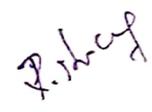
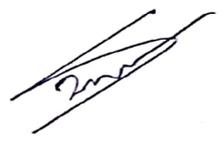
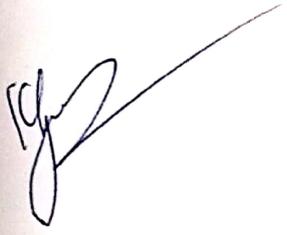
Event organization and time management

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

Additional Time and more hands on

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

Additional industrial training is required



View results

Respondent

26      Anonymous

04:41  
Time to complete

1. Roll Number \*

2. Name \*

3. Date \*

1/10/2023



## Feedback on General aspects of Value Added Programme

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



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



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



7. 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 \*



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



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



10. 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.

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



12. 9. Rate the infrastructure facilities provided to conduct the programme. \*



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



14. 11. Rate the Theory sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources. \*



15. 12. Rate the basic Hands-on sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources. \*



16. 13. Rate the Industrial training on Vermicomposting at JP Sustainable Foundation, Kulloorsandai, Virudhunagar. \*



17. 14. Rate the Industrial training on Mushroom cultivation by Mr R.Vijayakumar, Vcare Agro Tech Mushroom Farm, Mushroom Cultivation training centre, Madurai. \*



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



### Suggestions for Improvement

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

Visit and field work

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

Time

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

Needed time, more days need

*[Handwritten signature]*

*[Handwritten signature]*

*[Handwritten signature]*

View results

Respondent

41 Anonymous

05:15  
Time to complete

1. Roll Number \*

2. Name \*

3. Date \*

1/11/2023



## Feedback on General aspects of Value Added Programme

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



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



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



7. 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 \*



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



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



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.

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



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



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



14. 11. Rate the Theory sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources. \*



15. 12. Rate the basic Hands-on sessions handled for Vermicomposting and Mushroom cultivation by Internal Resources. \*



16. 13. Rate the Industrial training on Vermicomposting at JP Sustainable Foundation, Kulloorsandai, Virudhunagar. \*



17. 14. Rate the Industrial training on Mushroom cultivation by Mr R.Vijayakumar, Vcare Agro Tech Mushroom Farm, Mushroom Cultivation training centre, Madurai. \*



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



### Suggestions for Improvement

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

Hands on training in mushroom cultivation and seeing the vermicompost making process

10:30 AM

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

The program can be a bit longer

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

Overall the program was good. The time can be a bit longer



Programme Coordinators

HOD/BT

DEPARTMENT OF BIOTECHNOLOGY  
Industry Certified Value Added Programme  
On  
**MUSHROOM CULTIVATION AND VERMICOMPOSTING**

05/01/2023 to 10/01/2023

SUMMARY REPORT

A five days Industry Certified Value Added Programme entitled “Mushroom Cultivation and Vermicomposting” was organized by Department of Biotechnology, Kamaraj College of Engineering and Technology, Virudhunagar, in association with V - CARE AGRO TECH, Madurai and Jeypee Sustainability Foundation, Virudhunagar, from 05<sup>th</sup> to 10<sup>th</sup> February 2023 for II B.Tech Biotechnology students. The major objective of this programme was to give an insight on Entrepreneurship to the students and to provide hands on training in Biofertilizer production and Mushroom cultivation so that students will be able to learn the basic aspects of Mushroom cultivation and vermi-composting. “Mushroom” is an application part of Microbiology and Industrial biotechnology course work the students have learnt. This VAP helped them to develop entrepreneurship focus on Mushroom based product development. Vermicomposting training taught them how to start a Biofertilizer unit.

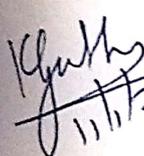
**Day 1** of the programme started with a short **Inauguration session** where our Head of the Department Dr. R.Sham Kumar introduced the theme of the VAP. This was followed by two sessions on the basic Introduction Theory behind Vermicomposting by Dr K.Geetha, ASP/BT. The afternoon sessions were handled by Dr S.Karthikumar and Dr R.Shyam Kumar where they gave a demonstration on how to prepare vermin beds in small scale. The students practiced preparing dummy beds as a part of this session.

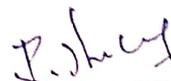
**Day 2** started with an interesting session on Applications of Vermicomposting and Vermiwash by Dr R. Shyam Kumar who gave a detailed insight into various fields where

Vermicompost and Vermiwash are being used successfully. This was followed by a session on Basic introduction and Theory behind Mushroom cultivation which was handled by Dr K.Geetha. The afternoon session of Day 2 was again a hands-on session on cultivation of pure culture for Mushroom cultivation process handled by Dr Karthikumar.

Day 3 was planned as an industrial visit to Jeypee Sustainability Foundation, Vindhunagar for a hands-on training on large scale production of Vermicomposting. The students were taken to the industry in college bus and they were accompanied by Dr R.Shyam Kumar and Dr S.Karthikumar along with senior lab technician Mr. Jaykumar. The industrial training on vermicomposting was handled by Mr. R. Palaneeshwar, Director, who gave a hands-on training on Vermicomposting along with intermittent inspirational talk on Entrepreneurship. The students spent one whole day in the industry to learn how vermicomposting is carried out at large scale. They also learnt the business side of the process.

Day 4 and 5 were completely dedicated to Mushroom cultivation. Hands-on training was given by Mr. R. Vijay Kumar, VCare Agro Tech, Madurai. On 4<sup>th</sup> day the students were given training on pre-treatment of paddy straw for mushroom bed preparation followed by guest lecture on various aspects of Mushroom cultivation like growth, maintenance, production, marketing and sustainability. The 5<sup>th</sup> day was a complete hands-on session on mushroom bed preparation and inoculation of mushroom spores in various methods. Finally the day ended with a short **Valedictory function** where students gave oral feedback and also certificates were distributed to all students. Overall students had a complete knowledge filled 5 days of Value addition to their Biotechnology career.

  
11/1/2023  
Programme Coordinators

  
HoD/BT

**DEPARTMENT OF BIOTECHNOLOGY**

**Expenditure details for Industry Certified Value Added Programme on  
 "MUSHROOM CULTIVATION AND VERMICOMPOSTING"**

05/01/2023 to 10/01/2023

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

S.No	Particulars	Place	Bill No	Date	Amount (Rs.)
1	JEYPEE Sustainability Foundation-Vermicomposting Industrial training	Kullorchandai, VNR	ITP-003	1/6/2023	3000.00
2	V-Care Agro Tech = Mushroom industrial training	Madurai	22	1/10/2023	11920.00
3	Arul Sceen & Offset Printing, Virudhunagar	VNR	283	1/6/2023	780.00
4	KCET Canteen - Lunch for 3 guests	VNR		1/9/2023	
5	KCET Canteen - Lunch for 1 guest	VNR		1/10/2023	
6	KCET Canteen - Tea and snacks for 5 members	VNR		1/9/2023	
7	KCET Canteen - Tea and snacks for 5 members	VNR		1/10/2023	
8	Transportation to Kullorsandai by College Bus (Rs 50/Head)-44 x Rs50	Kullorchandai, VNR		2/24/2022	2200.00
<b>TOTAL</b>					<b>17900.00</b>

**ABSTRACT**

Amount to be settled by Office via Online account transfer (S.No 1 and 2)	14,920/-
Amount to be settled by office within Institution (S.No 3,4,5,6,7 and 8)	2980/-

**Account details of Resource persons:**

1 **V - CARE AGRO TECH - Mushroom training**  
 State Bank of India  
 Narayanapuram Branch  
 A/c - 35487182076  
 IFSC Code : SBIN0011063  
 Pan number - AEPPV2668J

Amount to be transferred  
 Rs. 11,920/-

2 **Jeypee Sustainability Foundation - Vermicomposting Training**  
 Name of Account Holder : Jeypee Sustainability Foundation  
 Name of Bank : Canara Bank,  
 Account No. 0924201004047  
 IFSC Code: CNBR0000924  
 PAN NUMBER : AAECJ7828A

Rs. 3,000/-

*[Signatures]*  
 Programme Coordinators

*[Signature]*  
 HoD / BT

## Internal Quality Assurance Cell

### CheckList- Event Organized

Particulars	Yes / No / Not Applicable
Event Report – IQAC (Filled in Excel form, scanned copy of the form duly signed by the respective authorities in all the pages)	✓
Proposal document for funding	✓
Organizers details (Organizing secretary, Coordinator, Convener)	✓
Joint-Organizing agency/NGO details	✓
Institution Approval document	✓
Provide details of the major events (Funded Conferences, International Conference, other Funded Programmes) in our website in the upcoming events section	✓ NA
Circular	✓
Program organizing committee list (Coordinator/members both faculty & students)	✓
Program Evaluation / Monitoring Committee List for STTP / FDP / Sponsored Events	✓
Minutes of committee meetings for Sponsored Major Events – Duly signed by the respective authorities	✓
Brochure / Pamphlet / Flyer / Poster	✓
Program Schedule / Agenda	✓
Resource persons details (communication, acceptance and appreciation letters)	✓
Funding Agency details (Proof for funding, Expenditure details, Utilization certificate, Audited statement, Final Report sent to the funding agency)	NA
Attendance list of participants / delegates – Signed by the students and faculty	✓
Quality Geo-tagged photos (jpg/jpeg/tif/png format) with captions	✓
Quality Geo-tagged photos (jpg/jpeg/tif/png format) with captions	✓ NA
If an online event: Link for the program, Screen shots (should be taken in the video mode), Attendance Report	✓
Value added / Certificate courses	✓
1. Syllabus with course outcomes	✓
2. BoS Approval	✓
3. Evaluation Details (Questions, Sample Answer Sheets, Grade Sheets, if any...) (Please keep the copy (both hard and soft) of all the participants answer sheets in your department)	✓
4. Certificates (Sample copies- at least 5 – to be sent to IQAC) (Please keep the copy (both hard and soft copy) of all the participants certificates in your department)	✓
9. Certificates (Sample copies- at least 5 – to be sent to IQAC) (Please keep the copy (both hard and soft copy) of all the participants certificates in your department)	✓
20. Feedback (Questionnaire, Sample feedback, Report)	✓
21. Programme summary / Report (should be a separate page; include day-wise report with photos)	✓
22. Newspaper report	✓

*[Signature]*  
Organizing Secretary / Coordinator

*[Signature]*  
Convener / HoD

**Traning Programme**

**JEYPEE SUSTAINABILITY FOUNDATION**

2/527-1, EAST STREET,  
KULLORCHANDAI  
VIRUDHUNAGAR - 626004  
GSTIN/UIN: 33AAECJ7828A1ZU  
State Name : Tamil Nadu, Code : 33  
Contact : 04562242328,9443142328  
Fax : S.L No: 0805/RMD/2021

Buyer (Bill to)

**The Principal**  
Kamaraj College of Engineering and Technology,  
Virudhunagar

Invoice No. <b>ITP -003</b>	Dated <b>6-Jan-23</b>
Delivery Note	Mode/Terms of Payment <b>Credit</b>
Buyer's Order No.	Dated
Dispatch Doc No.	Delivery Note Date
Dispatched through	Destination
Terms of Delivery	

SI No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Amount
1	<b>Training Programme for Students</b> Vermicompost Traning Programme Second Year B.Tech (Bio Technology) Students	998611	<b>1 NO</b>	3,000.00	NO	<b>3,000.00</b>
<b>Total</b>			<b>1 NO</b>			<b>₹ 3,000.00</b>

Amount Chargeable (in words)

**RUPEES Three Thousand Only**

HSN/SAC	Taxable Value
998611	3,000.00
<b>Total</b>	<b>3,000.00</b>

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

Company's PAN : **AAECJ7828A**

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

Customer's Seal and Signature

Company's Bank Details  
A/c Holder's Name: **JEYPEE SUSTAINABILITY FOUNDATION**  
Bank Name: **Canara Bank**  
A/c No: **0924201004047**  
Branch & IFS Code: **Virudhunagar & CNRB0000924**

**JEYPEE SUSTAINABILITY FOUNDATION**  
2/527-1, East Street, Kullorchandai,  
Virudhunagar - 626 004 Tamilnadu  
Authorized Signatory

SUBJECT TO VIRUDHUNAGAR JURISDICTION

This is a Computer Generated Invoice



No. 22

**fssai** GST : 33AEPV2668J1ZT  
 SSI : 3302411-38268E  
 FSSAI : 22415570000153

Date : 10/01/2023

Farm & Lab : Natham Main Road, Chatthirapatti, Madurai - 14  
 Cell : 98428 15125, 9080073746

To M/s Principal  
Kanaraj College of Engg. & Tech., VNR  
K.V.Vellokulam - 625701

**Mushroom Spawn Manufacturing & Distribution**

S. No.	Particulars	Qty	Unit Price Per Kg (Rs)	Amount Rs.	Ps.
1.	Straw bundles	5	300/bundle	1500/-	
2.	Medicine	5 lts	50/ltr	250/-	
3.	Powder	0.5 kg	800/kg	400/-	
4.	Seeds	20 kg	150/kg	3000/-	
5.	Bed cover	1 kg	200/kg	200/-	
6.	Rubber bands	1 Pkt	70/Pkt	70/-	
7.	Transport	—	—	2500/-	
8.	Training charges	—	—	4000/-	

Grand Total 11,920/-

Rupees : Eleven thousand nine hundred twenty only

**V-Care Agro Tech**  
**For V-Care Agro Tech**  
R. Vijayakumar  
 Proprietor

Mushroom : Awareness, Training, Hut Construction, Spawn Supply, Marketing, Value Addition, etc.,...



# Arul

## Screen & Offset Printing

84898 78122 / 79048 50461

**BILL**

No. : 283

Date : 06/01/2023

13/4, MSSN Kasi Complex, Marakadai Street, Theppam South, VIRUDHUNAGAR-1

To Kamaraj College of Engineering & Technology  
S.P.G.Chidambara Nadar - C.Nagammal Campus,  
Vellakulam, Madurai District.

SL. No.	Particulars	Print	Rate	Qty	Rs.	Ps.	
1	Department of BT Certificate (Size : 45 x 15 cm) Multicolour Printing	-	15.00	52	780	-	
					<b>TOTAL</b>	<b>780</b>	<b>-</b>

*B.Ka*

Name : ARUL SCREEN PRINTING  
A/c No. : 5234990073  
Branch : Central Bank of India, Virudhunagar  
IFSC : CBIN0280919

Rupees Seven Hundred Eighty Only

For. Arul Screen & Offset Printing

Email : arulscreenprinting@gmail.com