

Rayat Shikshan Sanstha's,
Arts, Science and Commerce College, Mokhada
Department of Zoology
Short Term Course on: "Vermicomposting"
Course Code-USZS02 **Date: 02/09/2021**
Board of Studies-2021-22


Sr. No.	Designation	Name of Person
1)	Chairman	Hon. Prin. Dr. L. D. Bhor A.S.C.College,Mokhada.
2)	Member	Dr. S.K.Pawar Dept.of Zoology A.S.C.College,Mokhada.
3)	Member	Dr.A.L.Shaikh (Course Coordinator) Dept.of Zoology A.S.C.College,Mokhada.
4)	Member	Dr. J.A. Chavan Depat. of Zoology, Rajaram College, Kolhapur.
5)	Member	Dr. Y.J. Koli R.M. College, Kudal

Minutes of Online Meeting

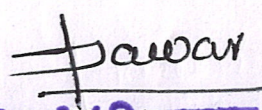
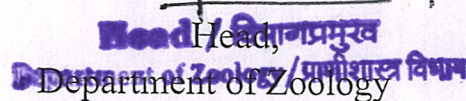
Board of studies meeting for the short term Course on "Vermicomposting " was held on 02 / 09 /2021 at 11.00 AM .

The Following points are discussed in the meeting

- Syllabus formation of **Vermicomposting** certificate course
- Distribution of work
- To run the course without fee for encouragement of Students


Course Co-ordinator




Head, 


Principal
Arts, Science & Commerce, College
Mokhada, Dist. Rahisar

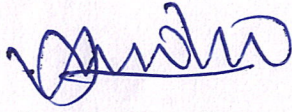
Rayat Shikshan Sanstha's,
Arts, Science and Commerce College, Mokhada, Dist: Palghar
Department of Zoology
2021-22

Short Term Course on Vermicomposting

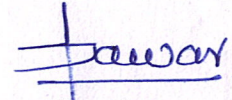
Date: 28/09/2021

Notice

All the students of T.Y.B.Sc. are hereby informed that short term course entitled as “**Vermicomposting**” is starting from 1st October 2021. All should remain present as per the instructions and time table.



Course Coordinator



Head,

Department of Zoology
Department of Zoology / प्राणीशास्त्र विभाग



Principal

Arts, Science & Commerce, College
Mokhada, Dist. Palghar

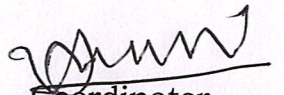
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Arts, Science and Commerce College, Mokhada, Dist. Palghar
Department of Zoology

Short term Course (NSQF)- Vermicomposting

Timetable

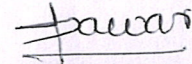
2021-2022

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Theory						
09.30 to 10.15 am	—	—	—	—	ALS	ALS
10.15 to 11.00 am	—	—	—	—	SKP	SKP
Practical						
02.05 to 05.05	—	—	—	—	—	ALS


Coordinator,

Short term Course





Head / विभागप्रमुख

Department of Zoology / प्राणीशास्त्र विभाग


Principal

Arts, Science & Commerce, College
Mokhada, Dist. Palghar



Syllabus for Certificate Course

In

Vermicomposting

Under the Scheme of

Skill Based Education under

UGC- National Skill Qualification Framework

Submitted

To

University of Mumbai, Mumbai

By

Rayat Shikshan Sanstha's,

Arts, Science & Commerce College, Mokhada

Taluka- Mokhada, Dist-Palghar, State- Maharashtra

Pin 401604

Ph. 02529-256628/256706

E-mail- asccmokhada@gmail.com

Website- www.asccmokhada.in



Syllabus for Certificate Course in Vermicomposting

1. Introduction:

Vermicomposting truly is nature's great disappearing act. Using worms to convert decomposing food waste into nutrient-rich fertilizer is simple, inexpensive, energy efficient, and a great way to teach students to become life-long recyclers. Vermicomposting technology is known throughout the world. As a process for handling organic residuals, it represents an alternative approach in waste management, in as much as the material is neither land filled nor burned but is considered a resource that may be recycled.

2. Rationale for introducing the course:

Vermicomposting is compatible with sound environmental principles that value conservation of resources and sustainable practices. Vermicomposting is a kin to composting in that similar feedstock-organic residuals -are used. Both systems utilize microbial activity to break down organic matter in the moist, aerobic environment. Vermicomposting is however faster, produces fewer odors and produces a superior product. Vermicomposting in developing countries could prove to be useful in many instances. Where accumulation of food wastes, paper, cardboard, agriculture waste, manures and biosolids is problematic, composting and vermicomposting offer potential to turn waste material into a valuable soil amendment. It is a great idea to switch from conventional chemicals to the organic fertilizer, vermicompost. Vermiculture enables any scale or size of operation.

3. Availability of relevant industry & Market survey undertaken in order to assess the feasibility:

Nasik is the growing town in the state. The MIDC and farming are developing very fast around Nasik city. The demand of organic farming and fertilizer is increasing very fast. So, lots of opportunities are available for students

4. Potential for employment generation:

The course is integrated with theoretical and practical concepts. After successfully completed this course, candidate able to compost in a limited space and describe the decomposing process. The interested students will get the knowledge of composting. Students will get the employment. They can generate employments, they will also turn towards organic farming. It will help to maintain the environment pollution free and if somebody wants to work independently as a consultant, it can give the person with nice opportunities in terms of earning great money.

5. Details about Structure\Pattern of Syllabus:

- **Title of the course** : Certificate Course in Vermicomposting
- **Duration of the Course** : One Semester
- **Name of the Faculty** : Arts, Science & Commerce
- **Compulsory Paper** : Six



- **Optional Paper** : Not Applicable
- **Medium of Instructions** : Marathi & English
- **Eligibility for admission** : Candidate should pass the higher secondary board or equivalent with English as one of the subject.
- **Intake Capacity** : 20 Students for the course
- **Course Level** : level-4
- The complete structure will be as follows.

❖ Certificate Course in Vermicomposting NSQF Level-4			
Course	General Education Component (Theory)	Credits	Total Marks
GEC-1	Vermiculture/ Vermicompost	03	30
GEC-2	Earthworm Biology and Rearing	03	30
GEC-3	Vermicompost Technology (Methods and Products)	03	30
GEC-4	Applied Vermiculture.	03	30
Skill Development Component (Practical)			
SDC-1	Practical – I (Based on Theory)	12	120
SDC-2	Practical – II (Field Work)	06	60
Total		30	300

6. Pattern of Examination:

a) Evaluation:

Examination will be held at the end of the course as per UGC-NSQF guidelines.

b) Standard of passing: Minimum 40%.

c) Award of Class, Percentage & Degree: as per UGC-NSQF guidelines.

d) External Student: NA

7. Pattern of Question paper: as per UGC-NSQF guidelines.

8. Infrastructure Available:

- a) ICT enabled Classroom.
- b) Availability of laboratory.

9. Teaching Faculty:

Sr. No.	Name of the Faculty	Qualification	Experience
1	Dr. S. K. Pawar	M.Sc, PhD	1 Year
2	Dr. A. L. Shaikh	M.Sc. SET, PhD	1 Year

10. Syllabus:



GEC-1 Vermiculture/ Vermicompost

- Introduction to vermiculture, definition, meaning, history, economic important, their value in maintenance of soil structure, role as four r's of recycling reduce, reuse, recycle, restore.
- His role in bio transformation of the residues generated by human activity and production of organic fertilizers. How does nature works. The matter and humus cycle (product, qualities). Ground population, transformation process in organic matter.
- Choosing the right worm. Useful species of earthworms. Local species of earthworms. Exotic species of earthworms. Complementary activities of autoevaluation.

GEC-2 Earthworm Biology and Rearing

- Key to identify the species of earthworms. Biology of *Eisenia fetida*. a) Taxonomy Anatomy, physiology and reproduction of Lumbricidae. b) Vital cycle of *Eisenia fetida*: alimentation, fecundity, annual reproducer potential and limit factors (gases, diet, humidity, temperature, PH, light, and climatic factors). Complementary activities of auto evaluation.
- Biology of *Eudrilus eugeniae*. Taxonomy Anatomy, physiology and reproduction of Eudrilidae. Vital cycle of *Eudrilus eugeniae*: alimentation, fecundity, annual reproducer potential and limit factors (gases, diet, humidity, temperature, PH, light, and climatic factors).
Complementary activities of auto evaluation.

GEC-3 Vermicompost Technology (Methods and Products)

- Small Scale Earthworm farming for home gardens
- Earthworm compost for home gardens.
- Conventional commercial composting
- Earthworm Composting larger scale.
- Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing.
- Nutritional Composition of Vermicompost for plants, comparison with other fertilizers. Vermiwash collection, composition & use. Enemies of Earthworms, Sickness and worm's enemies. Frequent problems. How to prevent and fix them.
-Complementary activities of auto evaluation.

GEC-4 Applied Vermiculture.

- The working group experience with *E. fetida* populations compartment with farm industrial residues (frigorific, cow places, feed-lot, aviaries exploitations, and solid urban residues).
- Lineaments to vermicomposting elaboration projects. Considerations about economical aspects of this activity. Research and ratibility according to different exploitation orientations (worm's meat production, worm's humus production, or integrated projects). Toxins released by the worms harmful effects)
Complementary activities of auto evaluation.



Practical's:

SDC-1 Practical – I

1. Key to identify different types of earthworms
2. Field trip- Collection of native earthworms & their identification
3. Study of Sytematic position, habits, habitat & External characters of Eisenia Fetida
4. Study of Life stages & development of Eisenia fetida.
5. Study of Life stages & development of Eudrilus eugeniae.
6. Comparison of morphology & life stages of Eisenia fetida & Eudrilus eugeniae.
7. Study of Vermiculture, Vermiwash & Vermicompost equipments, devices.
8. Preparation vermibeds, maintenance of vermicompost & climatic conditions.
9. Harvesting, packaging, transport and storage of Vermicompost and separation of life stages.
10. Study of verms diseases & enemies.
11. Study the effects of vermicompost & vermiwash on any two short duration crop plants.
12. Study the effects of sewage water on development of worms

SDC-2 Practical – II (Field Work)

References:

- i. Bhatt J.V. & S.R. Khambata (1959) "Role of Earthworms in Agriculture" Indian Council of Agricultural Research, New Delhi.
- ii. Dash, M.C., B.K.Senapati, P.C. Mishra (1980) " Vermis and Vermicomposting"Proceedings of the National Seminar on Organic Waste Utilization and Vermicomposting Dec. 5-8, 1984, (Part B), School of Life Sciences, Sambalpur University, Jyoti Vihar, Orissa.
- iii. Edwards, C.A. and J.R. Lofty (1977) "Biology of Earthworms" Chapman and Hall Ltd.,London.
- iv. Lee, K.E. (1985) "Earthworms: Their ecology and Relationship with Soils and Land Use" Academic Press, Sydney
- v. Kevin, A and K.E.Lee (1989) " Earthworm for Gardeners and Fisherman" (CSIRO, Australia, Division of Soils)
- vi. Satchel, J.E. (1983) "Earthworm Ecology" Chapman Hall, London.
8. Wallwork, J.A. (1983) "Earthworm Biology" Edward Arnold (Publishers) Ltd. London.

"Education Through Self - Help is Our Motto"

- Karmaveer

Rayat Shikshan Sanstha's



ARTS, SCIENCE & COMMERCE COLLEGE

(Central Govt. Sponsor + 2 Stage Vocational Education Course)

MOKHADA, Tal. : Mokhada, Dist.: Palghar - 401 604

Record of Attendance

Year 2021 - 2022

Class : T.Y.B.Sc Div: Zoology

Subject : Short Term Course on

Vermicomposting

Name of the Lecturer : _____

Arts, Science & Commerce College, Mokhada

Month: October 2021

Roll No.	Name of the Student	Category	Backlog												
				01	02	08	09	15	16	22	23	29	30		
9051/21	Burange Anil Devram			P	P	P		P	P	P	A	P	P		
9052/21	Choudhary Vijay Parshu			P	P	P		P	P	P	P	P	P		
9053/21	Dangate Jayesh Babu			P	A	P		A	P	P	P	P	A		
9054/21	Gode Yuvraj Jayram			A	P	P		P	A	P	P	P	P		
9055/21	Kalingade Vinod Dilip			P	P	A		P	A	P	P	P			
9056/21	Valvi Sachin Bandu			A	P	P		P	P	P	P	A	P		
9057/21	Waghare Devendra Pandu			P	P	P		A	P	P	P	P	P		
9059/21	Warghade Vaishali Kashinath			P	P	P		P	P	P	P	P	A		
9058/21	Warghade Sonali Chandrakant			A	P	P		P	P	P	P	P	P		
9060/21	Mule Bhushan Sanjay			A	P	P		P	A	P	P	P	P		
9001/21	Badade Rupali Laxman			P	A	P		P	P	P	P	A	A		
9002/21	Bhoye Jayesh Chandar			P	P	P		A	P	P	P	P	P		
9003/21	Bhoye Tushar Mavanji			A	P	P		P	A	P	P	P	P		
9004/21	Ghane Kajal Vaman			A	P	A		P	P	P	P	P	A		
9005/21	Ghatal Ratna Parshuram			P	P	P		P	P	P	P	P	P		
9006/21	Korde Jaya Ramdas			A	P	P		P	P	A	P	P	A		
9007/21	Lahare Pratik Parshuram			P	P	P		A	P	P	A	P	P		
9009/21	Lahare Pravina Dattu			P	P	P		P	P	A	P	P	P		
9008/21	Mahale Sandip Devram			P	P	P		P	P	P	A	P	P		
9010/21	Maule Jayshree Arjun			P	P	P		P	P	P	A	P	P		

(Signature)

(course co-ordinator)

(Signature)
Head

Department of Zoology

(Signature)
Principal

Arts, Science & Commerce, College
Mokhada, Dist. Palghar



Arts, Science & Commerce College, M

Month : November 20

Roll No.	Name of the Student	Category	Backlog	05	06	12	13	19	20	26	27
9051/21	Burange Anil Devram							PP	/		
9052/21	Choudhary Vijay Parshu							PP	/		
9053/21	Dangate Jayesh Babu							AP	/		
9054/21	Gode Yuvraj Jayram							PP	/		
9055/21	Kalingade Vinod Dilip							PP	/		
9056/21	Valvi Sachin Bandu							PP	/		
9057/21	Waghare Devendra Pandu							PP	/		
9059/21	Warghade Vaishali Kashinath							PP	/		
9058/21	Warghade Sonali Chandrakant							PP	/		
9060/21	Mule Bhushan Sanjay							PP	/		
9001/21	Badade Rupali Laxman							AP	/		
9002/21	Bhoye Jayesh Chandar							PA	/		
9003/21	Bhoye Tushar Mavanji							PP	/		
9004/21	Ghane Kajal Vaman							PP	/		
9005/21	Ghatal Ratna Parshuram							PA	/		
9006/21	Korde Jaya Ramdas							AP	/		
9007/21	Lahare Pratik Parshuram							PP	/		
9009/21	Lahare Pravina Dattu							PP	/		
9008/21	Mahale Sandip Devram							PP	/		
9010/21	Maule Jayshree Arjun							PP	/		

DIXALI VACATIONS

THEORY EXAM

(Signature)
 (course co-ordinator)

(Signature)
 Head

Department of Zoology

(Signature)
 Principal

Arts, Science & Commerce, College
Mokhada, Dist. Paigdar

Arts, Science & Commerce College, M

Month : December 202

Roll No.	Name of the Student	Catagary	Backlog	3	4	10	11	17	18	24	25	31
9051/21	Burange Anil Devram			P	P	P	P	P	P	P		
9052/21	Choudhary Vijay Parshu			P	P	P	P	P	P	P		
9053/21	Dangate Jayesh Babu			P	P	P	A	A	P			
9054/21	Gode Yuvraj Jayram			P	P	A	A	P	P	P		
9055/21	Kalingade Vinod Dilip			P	A	P	P	A	P	P		
9056/21	Valvi Sachin Bandu			P	P	A	P	P	P	P		
9057/21	Waghare Devendra Pandu			P	P	P	P	P	P	A		
9059/21	Warghade Vaishali Kashinath			P	P	P	P	P	P	P		
9058/21	Warghade Sonali Chandrakant			P	P	P	A	P	P			
9060/21	Mule Bhushan Sanjay			P	P	P	P	P	P	P		
9001/21	Badade Rupali Laxman			P	P	P	A	P	P	A		
9002/21	Bhoye Jayesh Chandar			P	P	P	P	P	P	P		
9003/21	Bhoye Tushar Mavanji			P	P	A	P	P	P			
9004/21	Ghane Kajal Vaman			P	A	P	P	P	P	P		
9005/21	Ghatal Ratna Parshuram			P	P	P	P	P	P	A		
9006/21	Korde Jaya Ramdas			A	P	P	P	P	P	P		
9007/21	Lahare Pratik Parshuram			P	P	P	P	P	A	P		
9009/21	Lahare Pravina Dattu			P	P	A	P	A	P	P		
9008/21	Mahale Sandip Devram			P	P	P	P	P	P	P		
9010/21	Maule Jayshree Arjun			P	P	P	P	P	P	P		

(Signature)
 (course co-ordinator)

(Signature)
 Head
 Department of Zoology



(Signature)
 Principal

Arts, Science & Commerce, College
 Mokhada, Dist. Falghar

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9008/21	Mahale Sandip Devram		
9010/21	Maule Jayshree Arjun		

(Signature)
 (course co-ordinator)

Head
 Department of Zoology



01	07	08	14	15	21	22	28	29
P	P	P	A	P	P	P		
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(Signature)
 Principal

Arts, Science & Commerce, College
 Mokhadu, Dist. Palghar

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9007/21	Lahare Pratik Parshuram		
9009/21	Lahare Pravina Dattu		
9008/21	Mahale Sandip Devram		
9010/21	Maule Jayshree Arjun		

4	5	11	12	18	19	25	26
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(Signature)
 (course co-ordinator)

(Signature)
 Head
 Department of Zoology



(Signature)
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Rayat Shikshan Sanstha's
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Department of Zoology

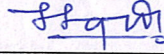
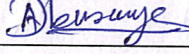
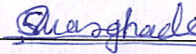
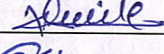
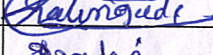
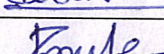
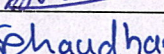
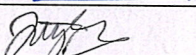
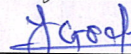

T.Y.B.Sc.

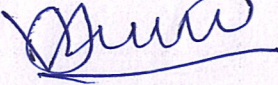
2021-2022

A Short Term Course on Vermicomposting

Theory - Attendance

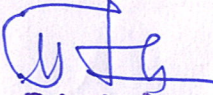
Date: 29/03/22

Sr.	Roll No.	Name of the Student	Signature
1.	9057	Waghare Devendra pandu	
2.	9051	Burange Anil Devram	
3.	9058	Warghade Sonali Chandrakant	
4.	9059	Warghade. vaishali kashinath	
5.	9055	Kalingade vinod dilip	
6.	9056	Valvi Sachin Bandu	
7.	9060	Mule Bhushan Sanjay	
8.	9052	Chaudhari vijay paashu	
9.	9053	Dangate Jayesh Babu	
10.	9054	Yuvraj Jaysam Gode	



(Course Co-ordinator)




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Mokhada, Dist. Palghar

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Department of Zoology

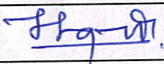
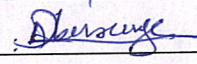
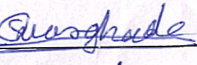
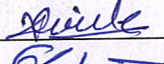
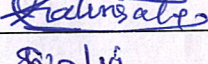
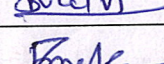
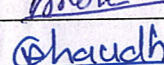
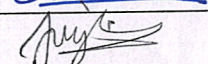
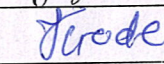
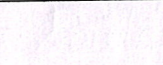
T.Y.B.Sc.

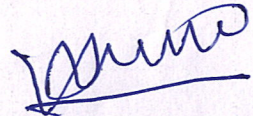
2021-2022

A Short Term Course on Vermicomposting

Practical - Attendance

Date: 31/03/22

Sr.	Roll No.	Name of the Student	Signature
1.	9057	Naghare Devendra pandu	
2.	9051	Burange Anil Devsum	
3.	9058	Wasghade Sonali Chandrakant	
4.	9059	Waryhele Vaibhavi Kashinath	
5.	9055	Kalingade Vinod Dilip	
6.	9056	Valvi Sachin bandu	
7.	9060	Mule Bhushan Sanjay	
8.	9052	Chaudhari Vijay Parsha	
9.	9053	Dangate Jayesh Babu	
10.	9054	Gode Purnaj Jayson	


(Course co-ordinator)




Principal
Arts, Science & Commerce, College
Mokhada, Dist. Palghar

Rayat Shikshan Sanstha's

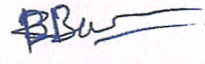


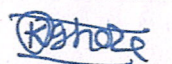
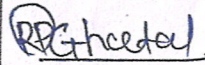
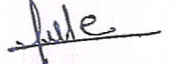
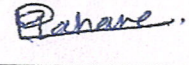
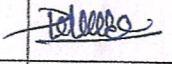
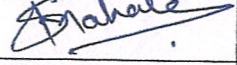
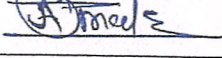
Arts, Science and Commerce College, Mokhada Dist. Palghar

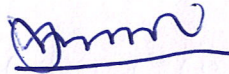
Department of Zoology

Short Term Course on Vermicomposting

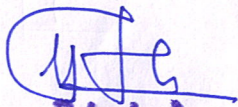
Theory Examination

Attendance Sheet

Roll No.	Name of the student	Signature
9001	Badade Rupali Laxman	
9002	Bhoye Jayesh Chandar	
9003	Bhoye Tushar Mavanji	
9004	Ghane Kajal Vaman	
9005	Ghatal Ratna Parshuram	
9006	Korde Jaya Ramdas	
9007	Lahare Pratik Parshuram	
9009	Lahare Pravina Dattu	
9008	Mahale Sandip Devram	
9010	Maule Jayshree Arjun	


(course co-ordinator)




Principal
Arts, Science & Commerce, College
Mokhada, Dist. Palghar


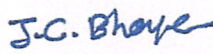
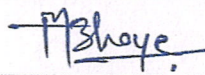

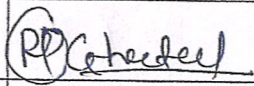
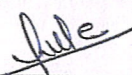
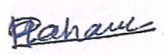
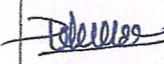
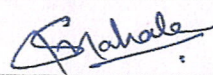
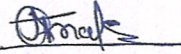
Rayat Shikshan Sanstha's
Arts, Science and Commerce College, Mokhada Dist. Palghar

Department of Zoology .

Short Term Course on Vermicomposting

Practical Examination

Attendance Sheet

Roll No.	Name of the student	Signature
9001	Badade Rupali Laxman	
9002	Bhoye Jayesh Chandar	
9003	Bhoye Tushar Mavanji	
9004	Ghane Kajal Vaman	
9005	Ghatal Ratna Parshuram	
9006	Korde Jaya Ramdas	
9007	Lahare Pratik Parshuram	
9009	Lahare Pravina Dattu	
9008	Mahale Sandip Devram	
9010	Maule Jayshree Arjun	



(Course Co-ordinator)



Principal

Arts, Science & Commerce, College
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Rayat Shikshan Sanstha's,
Arts, Science and Commerce College, Mokhada, Dist: Palghar
Department of Zoology
2021-22

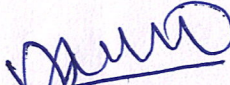
Short Term Course on Vermicomposting

Date: 25/03/2022

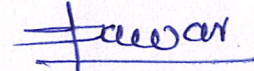
Notice

All the students of T.Y.B.Sc. are hereby informed that theory and practical examination of the Short-Term Course on 'Vermicomposting' will be held as per the time table given below. All should remain present.

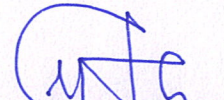
Sr. No.	Subject	Date	Time
1	Theory Examination	29/03/2022	11:00 am – 1:00 pm
2	Practical Examination	31/03/2022	11:00 am – onwards


Course Coordinator




Head,

Department of Zoology
Department of Zoology / प्राणीशास्त्र विभाग


Principal

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Mokhada, Dist. Palghar

Rayat Shikshan Sanstha's,
Arts, Science and Commerce College, Mokhada Dist. Palghar

Department of Botany
Short Term Course Theory Examination

Vermicomposting

Class: T.Y.B.Sc

Day & Date: Tuesday, 29/03/2022

Time: 11:00 am – 1:00 pm

Total Marks: 50

Que.1. Choose correct alternative.

10

Marks

i) Vermicompost is used as a biofertilizer because it is composed of _____

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

ii) The moisture level required for vermicomposting should be between-

- a) Below 30% b) 40-60% c) 70-80% d) Above 90%

iii) Maximum temperature required for vermicomposting should be _____

- a) 20°C to 25°C b) 25°C to 30°C c) 30°C to 35°C d) 35°C to 40°C

iv) Which of the following cannot be used in vermicomposting?

- a) Cow dung b) Plant material c) Animal meat d) All of the above

v) Vermicompost is a/ an _____

- a) Inorganic fertilizer b) Organic fertilizer c) Toxic material d) Synthetic fertilizer

vi) Which one of the following is **NOT** a major reason for choosing earthworms for vermicomposting?

- a) Low incubation time b) High digestion rate c) Adaptability d) Low growth rate

vii) Earthworms are considered as the _____ of soil fertility.



a) Chemical indicator b) Biological indicator c) Physical indicator d) All of the above

viii) Earthworm belongs to the phylum _____.

a) Arthropoda b) Annelida c) Insecta d) Echinodermata

ix) Enemies of earthworms are _____.

a) Ants b) Birds c) Centipedes d) All of the above

x) The cultivation of earthworms, especially in order to use them to convert organic waste into fertilizer is called _____.

a) Sericulture b) Vermiculture c) Apiculture d) None of these

Que.2. Write short note (Any FOUR)

20 Marks

- i) Importance of Vermicompost.
- ii) Vermiwash collection, its composition and use.
- iii) Vermicomposting harvest, extraction and processing.
- iv) Pit method of Vermicomposting
- v) Bed method of Vermicomposting.

Que.3. Answer the following. (Any TWO)

20 Marks

- i) Describe in detail Vermicompost production and add a note on its harvesting and packaging
- ii) Explain morphological features of earthworm. Add a note on its Habit and Habitat.
- iii) Describe in detail Life cycle and development of *Eudrilus eugeniae*



Rayat Shikshan Sanstha's
Arts, Science and Commerce College, Mokhada Dist. Palghar
Department of Zoology
Short Term Course on Vermicomposting

Class: T.Y.B.Sc

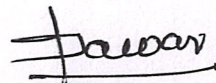
2021-22

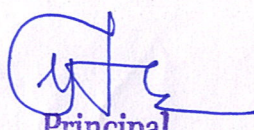
Mark Sheet

Roll No.	Name of the student	Theory (50)	Practical (50)	Total (100)	Grade
9051	Burange Anil Devram	39	41	80	O
9052	Chaudhary Vijay Parshu	43	44	87	O
9053	Dangate Jayesh Babu	38	39	77	A
9054	Gode Yuvraj Jayram	43	43	86	O
9055	Kalingade Vinod Dilip	44	43	87	O
9056	Valvi Sachin Bandu	40	40	80	O
9057	Waghare Devendra Pandu	45	45	90	O
9059	Warghade Vaishali Kashinath	43	44	87	O
9058	Warghade Sonali Chandrakant	39	40	79	A
9060	Mule Bhushan Sanjay	38	39	77	A
9001	Badade Rupali Laxman	43	42	85	O
9002	Bhoye Jayesh Chandar	44	45	89	O
9003	Bhoye Tushar Mavanji	40	40	80	O
9004	Ghane Kajal Vaman	40	42	82	O
9005	Ghatal Ratna Parshuram	46	43	89	O
9006	Korde Jaya Ramdas	48	48	96	O
9007	Lahare Pratik Parshuram	42	46	88	O
9008	Lahare Pravina Dattu	40	42	82	O
9009	Mahale Sandip Devram	42	44	86	O
9010	Maule Jayshree Arjun	43	44	87	O


Course Coordinator




Head,
Department of Zoology
Department of Zoology / प्राणीशास्त्र विभाग

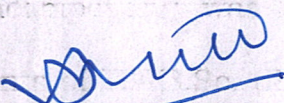

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Rayat Shikshan Sanstha's
Arts, Science and Commerce College, Mokhada, Dist. Palghar
Department of Zoology

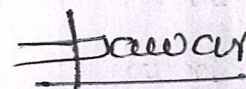
Short Term Course on Vermicomposting
Report

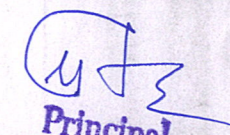
Date: 04/04/2022

To inculcate applied knowledge of the subject a short term course entitled Vermicomposting was conducted by the department of Zoology. Total 20 students of T.Y.B.Sc. (Botany and Zoology) were admitted for this course. The syllabus was completed within stipulated time as per the timetable. All 20 students appeared for the exam and have successfully completed the course.


Course Coordinator




Head, / विभागाध्यक्ष
Department of Zoology / जीवशास्त्र विभाग


Principal
Arts, Science & Commerce, College
Mokhada, Dist. Palghar

Course Coordinator

Department of Zoology



**Rayat Shikshan Sanstha, Satara
Karmaveer Vidya Prabodhini**

CERTIFICATE

This is to certify that Shri / Smt Kalingade Vinod Dilip

..... (Class T.Y.B.Sc. Zoology) of

(College) Arts, Science and Commerce College

Mokhada, Dist. Palghar has successfully completed

a short term course in Vermicomposting

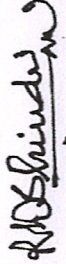
Academic year 2021 - 2022 (From 01/10/2021 To 31/03/2022) and

secured 0 Grade.


PRINCIPAL

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Mokhada, Dist. Palghar





Executive Director
Karmaveer Vidyaprabodhini



Chairman
Karmaveer Vidyaprabodhini



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Rayat Shikshan Sanstha, Satara
Karmaveer Vidya Prabodhini

CERTIFICATE

This is to certify that **Srri / Smt. Madhghade Vaishali Kashinath**

..... (Class **T.Y.B.Sc Zoology**) of

(College) **Arts, Science and Commerce College**

..... **Mokhada, Dist. Paighar** has successfully completed

a short term course in **Vermicomposting**

Academic year **2021** **2022** (From **01/10/2021** To **31/03/2022**) and

secured **0**..... Grade.



Principal
Arts Science and Commerce College
Mokhada, Dist. Paighar



Executive Director
Karmaveer Vidyaprabodhini

Chairman
Karmaveer Vidyaprabodhini

Rayat Shikshan Sanstha, Satara
Karmaveer Vidya Prabodhini

CERTIFICATE

This is to certify that Shri / Smt Madhade Sonali Chandrakant

..... (Class T.Y.B.Sc Zoology) of


(College) Arts, Science and Commerce College

..... Mokhada, Dist. Palghar has successfully completed

a short term course in Vegetable Composting

Academic year 2021 2022 (From 01/10/2021 To 31/03/2022) and


secured A Grade.


PRINCIPAL
 Arts Science and Commerce College
 Mokhada, Dist. Palghar





Executive Director
 Karmaveer Vidya Prabodhini


Chairman
 Karmaveer Vidya Prabodhini



**Rayat Shikshan Sanstha, Satara
Karmaveer Vidya Prabodhini**

CERTIFICATE

This is to certify that Shri / Smt Burange Anil Devram

..... (Class T.Y.B.Sc. Zoology) of

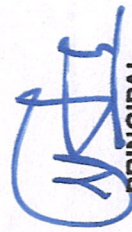
(College) Arts, Science and Commerce College

Mokhada, Dist. Palghar has successfully completed

a short term course in Vermicomposting

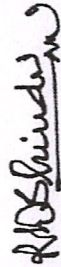
Academic year 2021 - 2022 (From 01/10/2021 To 31/03/2022) and

secured 0 Grade.


PRINCIPAL

Arts Science and Commerce College
Mokhada, Dist. Palghar





Executive Director
Karmaveer Vidya Prabodhini



Chairman
Karmaveer Vidya Prabodhini



Rayat Shikshan Sanstha, Satara
Karmaveer Vidya Prabodhini

CERTIFICATE

This is to certify that Shri / Smt Waghare Devendra Pandu

..... (Class T.Y.B.Sc Zoology) of

(College) Arts, Science and Commerce College

Mokhada, Dist. Paighar

..... has successfully completed

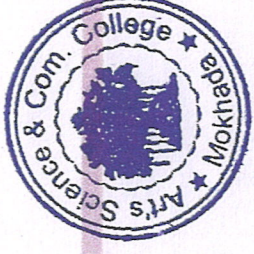
a short term course in Vermi Composting

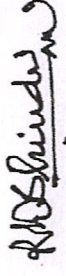
Academic year 2021 2022 (From 01/10/2021 To 31/03/2022) and

secured 0..... Grade.


PRINCIPAL

Arts Science and Commerce College
Mokhada, Dist. Paighar





Executive Director
Karmaveer Vidyaprabodhini



Chairman
Karmaveer Vidyaprabodhini