Model Curriculum

QP Name: Vermi Composter

QP Code: STC - AGR/NSQF-2022/0234

QP Version: 2.0

NSQF Level: 3

Model Curriculum Version: 2.0

West Bengal State Council of Technical & Vocational Education and Skill Development, Karigari Bhavan, (5th Floor), Plot-B/7, Action Area-III, New Town, Kolkata-700160

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Training Parameters

Sector	Agriculture
Sub-Sector	Other Allied
Occupation	Vermi Composter
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	6111.0100
Minimum Educational Qualification and Experience	1. Grade 10 OR 2.Grade 8 pass and pursuing continuous schooling in regular school with vocational subject OR 3.Grade 8 Pass with 2 year experience OR 4.5th Grade Pass with 5 yrs experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 years
Last Reviewed On	3.5.2023
Next Review Date	3.5.2026
Version	2.0
NSQC Approval Date	3.5.2023
Model Curriculum Creation Date	3.5.2023
Model Curriculum Valid Upto Date	3.5.2026
Model Curriculum Version	2.0
Minimum Duration of the Course	360 hours
Maximum Duration of the Course	360 hours

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the participants will be able to:

- Identify the species of earthworm capable for producing vermi compost from agriculture waste.
- Construct the compost pit and bed with Pit method.
- Prepare vermin and other compost.
- Collect the vermi wash, analyse the composition and apply to the field
- Pack vermi compost and other compost for transportation
- Apply the compost fertilizer in agricultural field according to the composition of the soil.
- Work in real job situation with special emphasis on basic safety and hazards in this domain.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
AGR/0234/OC1 Identify the species of earthworm capable for producing vermi compost from agriculture waste. NOS Version No. :2.0 NSQF Level:3	**10:00 Hours**	**20:00 Hours**	**00:00Hours**	**00:00Hours**	**30:00 Hours**
Module1: Identify the species of earthworm capable for producing vermi compost from agriculture waste.	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
AGR/0234/OC2 Construct the compost pit and bed with Pit method. NOS Version No.:2.0 NSQF Level: 3	**10:00 Hours**	**20:00 Hours**	**00:00Hours**	**00:00Hours**	**30:00 Hours**
Module2: Construct the compost pit and bed with Pit method.	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours

AGR/0234/OC3 Prepare vermin and other compost. NOS Version No.:2.0 NSQF Level:3	**10:00 Hours**	**20:00 Hours**	**00:00Hours**	**00:00Hours**	**30:00 Hours**
Module 3: Prepare vermin and other compost.	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
AGR/0234/OC4 Collect the vermi wash, analyse the composition and apply to the field NOS Version No.:2.0 NSQF Level: 3	**10:00 Hours**	**20:00 Hours**	**00:00Hours**	**00:00Hours**	**30:00 Hours**
Module 4: Collect the vermi wash, analyse the composition and apply to the field	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
AGR/0234/OC5 Pack vermi compost and other compost for transportation NOS Version No.: 2.0 NSQF Level: 3	**10:00 Hours**	**20:00 Hours**	**00:00Hours**	**00:00Hours**	**30:00 Hours**
Module 5: Pack vermi compost and other compost for transportation	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
AGR/0234/OC6 Apply the compost fertilizer in agricultural field according to the composition of the soil. NOS Version No.:2.0 NSQF Level: 3	**10:00 Hours**	**20:00 Hours**	**00:00Hours**	**00:00Hours**	**30:00 Hours**
Module 6:Apply the compost fertilizer in agricultural field according to the composition of the soil.	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
AGR/0234/OC7 Work in real job situation with special emphasis on basic safety and hazards in this domain.	**00:00 Hours**	**00:00 Hours**	**120:00Hours**	**00:00Hours**	**120:00 Hours**

NOS Version No.: 2.0 **NSQF Level: 3**					
Module 7: Work in real job situation with special emphasis on basic safety and hazards in this domain.	00:00 Hours	00.00 Hours	120:00Hours	00:00Hours	120:00 Hours
DGT/VSQ/N0102 Employability Skills **NOS Version No.: 1.0** **NSQF Level: 3**	**60:00 Hours**	**00:00Hours**	**00:00Hours**	**00:00Hours**	**60:00 Hours**
Module 8: Employability Skills	60:00 Hours		00:00Hours	00:00Hours	60:00 Hours
Total Duration	**120:00 Hours**	**120:00 Hours**	**120:00Hours**	**00:00Hours**	**360:00 Hours**

Module Details

Module1: Identify the species of earthworm capable for producing vermi compost from agriculture waste.

Mapped to AGR/0234/OC1,V2.0

Terminal Outcomes:

- Identify and select types of earthworm species.
- Illustrate the role of earthworm in soil.
- Identify earthworm through morphological and physiological examination.
- Select the agriculture waste for producing vermi compost
- Prepare vermi compost by using commercial Earthworms.

Duration: *10:00*	Duration: *20:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
The candidate will be able to describe the following:- ● Information about types of organic manures. ● Information about source of organic manures. ● Knowledge about use of Organic manures in field. ● Knowledge about importance of Organic manures. ● Understanding and identifying types of earthworm species. Knowledge about role of earthworms in soil. ● Comprehending importance of vermicomposting. ● Enumerating benefits of vermicompost.	The candidate will be able to demontrate the following:- ● Practice on selection of commercial earthworm Species based on Morphological characteristics viz. Eiseniafoetida, Eudriluseuginae, Perionyxexcavatus ● Practice on preparation of vermicompost using commercial earthworms. ● Practice on breeding of Earthworms in tray and rack. ● Practice on rearing of earthworms in tray and rack. ● Practice on segregating adult earthworms for vermi production.
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Shovel, Spade (kodali), Crowbars, Iron baskets, Dung fork, Buckets, Bamboo baskets, Trowel Water distribution pump, Power operated shredder, Sieving machine with 3 wire mesh sieves.Weighing scale (100 kg capacity), Weighing machine (platform type), Bag sealing machine Culture trays (plastic) (35 cm x 45 cm), Wheel barrows , Kodal (long size), Water spraying machine, Pump set, Drum(plastic), Gumla big size, Finger type Kodal (long size) Hand type Belcha, Iron sieve, Black polythene sheet 20 inch ×15 inch, Jute bag long size Fork Hoe (Nirani), Archara (hand type iron made wire net)	

Module 2: Construct the compost pit and bed with Pit method.

Mapped to AGR/0234/OC2,V2.0

Terminal Outcomes:

- Identify and select the location for preparation of compost pit.
- Select the raw materials required for compost pit
- Prepare the pit as per requirement and size.
- Follow the proper procedure for preparation of compost.
- Practice on Pit method of vermicomposting.
- Practice on Heap method of vermicomposting.
- Practice on Poly-vermi method.
- Practice on Hanging methods.
- Enumerating possible risks and hazards in the work environment
- Practising safety exercise.

Duration: *10:00*	**Duration: *20:00***
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
The candidate will be able to describe the followings:- ● Description and methods of vermicomposting. ● Select the raw materials required for compost pit. Prepare the pit as per requirement and size. ● Follow the proper procedure for preparation of compost. Practice on Pit method of vermicomposting. ● Describe Heap method of vermicomposting. Practice on Poly-vermi method. Practice on Hanging methods. Enumerating possible risks and hazards in the work environment ● Awareness about safety exercise.	The candidate will be able to demonstrate the followings:- ● Identify and select the location for preparation of compost pit. ● Select the raw materials required for compost pit. Prepare the pit as per requirement and size. ● Follow the proper procedure for preparation of compost. Practice on Pit method of vermicomposting. ● Practice on Heap method of vermicomposting. Practice on Poly-vermi method. ● Practice on Hanging methods. ● Enumerating possible risks and hazards in the work environment ● Practising safety exercise.
Classroom Aids:	
Computer,Projection Equipment, Power Point Presentation and software,Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	

Shovel, Spade (kodali), Crowbars, Iron baskets, Dung fork, Buckets, Bamboo baskets, Trowel
Water distribution pump, Power operated shredder, Sieving machine with 3 wire mesh sieves.
Weighing scale (100 kg capacity), Weighing machine (platform type), Bag sealing machine
Culture trays (plastic) (35 cm x 45 cm), Wheel barrows , Kodal (long size), Water spraying machine, Pump set, Drum(plastic), Gumla big size, Finger type Kodal (long size)
Hand type Belcha, Iron sieve, Black polythene sheet 20 inch ×15 inch, Jute bag long size
Fork Hoe (Nirani), Archara (hand type iron made wire net)

Module 3: Prepare vermin and other compost.

Mapped to AGR/0234/OC3,V2.0

Terminal Outcomes:

- Identify the raw materials require for compost
- Plan and select the size of the tank
- Collect the bio mass
- Prepare the bed for compost
- Put the raw materials require in the tank.
- Observe regularly and have a frequent check.
- Practice of breeding of earthworms in the tray and rack.

Duration: *10:00*	**Duration: *20:00***
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
The candidate will be able to describe the followings:- ● Studying various steps used in preparation of vermicompost ● Studying various steps involved in application of bed wash in field (Dilution by water, foliar spraying and soil application) ● Studying various steps involved in application of vermiwash in filed (Dilution by water, foliar spraying and soil application)	The candidate will be able to demonstrate the followings:- ● Practice on selecting compostable and non-compostable raw materials. ● Practice on mixing of raw materials in proper proportion. ● Selecting proper method of decomposition from various methods viz. open system, poly system and pit system ● Prepare the bed for compost ● Put the raw materials require in the tank. ● Observe regularly and have a frequent check. ● Practice of breeding of earthworms in the tray and rack.
Classroom Aids:	
Computer,Projection Equipment,Power Point Presentation and software	
Tools, Equipment and Other Requirements	
Shovel, Spade (kodali), Crowbars, Iron baskets, Dung fork, Buckets, Bamboo baskets, Trowel Water distribution pump, Power operated shredder, Sieving machine with 3 wire mesh sieves. Weighing scale (100 kg capacity), Weighing machine (platform type), Bag sealing machine Culture trays (plastic) (35 cm x 45 cm), Wheel barrows , Kodal (long size), Water spraying machine, Pump set, Drum(plastic), Gumla big size, Finger type Kodal (long size) Hand type Belcha, Iron sieve, Black polythene sheet 20 inch ×15 inch, Jute bag long size Fork Hoe (Nirani), Archara (hand type iron made wire net)	

Module 4: Collect the vermi wash, analyse the composition and apply to the field

Mapped to AGR/0234/*OC4*,V2.0

Terminal Outcomes:

- Set up the vermi wash procedure
- Set up the collection device in proper place
- Collet the vermi wash
- Identify the composition of vermi wash
- Recognize the role of vermi wash in crop production

Duration: *10:00*	**Duration:** *20:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• The candidate will be able to describe the followings:- • Explain the vermi wash procedure • Procedure for setting up the collection device in proper place • Colletion of vermi wash • Identify the composition of vermi wash • Recognize the role of vermi wash in crop production. • Practice on application of vermicompost based on soil profile, field area and crop types. • Practice on application of bedwash in field by foliar spraying . Practice on application of vermiwash in filed by foliar spraying	• The candidate will be able to demonstrate the followings:- • Set up the vermi wash procedure • Set up the collection device in proper place • Collet the vermi wash • Identify the composition of vermi wash • Recognize the role of vermi wash in crop production • Practice on application of vermicompost based on soil profile, field area and crop types. • Practice on application of bedwash in field by foliar spraying • Practice on application of vermiwash in filed by foliar spraying
Classroom Aids:	
Computer,Projection Equipment, Power Point Presentation and software,Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Shovel, Spade (kodali), Crowbars, Iron baskets, Dung fork, Buckets, Bamboo baskets, Trowel Water distribution pump, Power operated shredder, Sieving machine with 3 wire mesh sieves. Weighing scale (100 kg capacity), Weighing machine (platform type), Bag sealing machine Culture trays (plastic) (35 cm x 45 cm), Wheel barrows , Kodal (long size), Water spraying machine, Pump set, Drum(plastic), Gumla big size, Finger type Kodal (long size) Hand type Belcha, Iron sieve, Black polythene sheet 20 inch ×15 inch, Jute bag long size Fork Hoe (Nirani), Archara (hand type iron made wire net).	

Module 5: Pack vermi compost and other compost for transportation

Mapped to AGR/0234/OC5,V2.0

Terminal Outcomes:

- Identify the materials required for packaging of vermi compost.
- Practice on packaging of vermi compost
- Practice for different weight of vermi compost for farmers and domestic users

Duration: *10:00*	Duration: *20:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
The student will able to describe the following:- • Select and identify the materials required for packaging. • Procedure for packaging of vermi compost. • Procedure for weight of vermi compost for the users of farmers and domestic users.	The students will be able to do the following activities: • Identify the materials required for packaging of vermi compost. • Practice on packaging of vermi compost • Practice for different weight of vermi compost for farmers and domestic users
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Shovel, Spade (kodali), Crowbars, Iron baskets, Dung fork, Buckets, Bamboo baskets, Trowel Water distribution pump, Power operated shredder, Sieving machine with 3 wire mesh sieves- Weighing scale (100 kg capacity), Weighing machine (platform type), Bag sealing machine Culture trays (plastic) (35 cm x 45 cm), Wheel barrows , Kodal (long size), Water spraying machine, Pump set, Drum(plastic), Gumla big size, Finger type Kodal (long size) Hand type Belcha, Iron sieve, Black polythene sheet 20 inch ×15 inch, Jute bag long size Fork Hoe (Nirani), Archara (hand type iron made wire net).Physical rough balance Capacity=50Kg Readability= 1gm SS Pan size (mm) = 250×330, Magnetic Starrer, with Hot Plate, Thermometer,0degC to 100 deg C glass. Horizontal mechanical rotary shaker, 250mlx24 flask , Muffle furnce, size of inner chamber (5''x 5''x 10'')inch, Soxhlet apparatus with six chamber mantle type,flask capacity 250ml, Serological water bath	

Module 6: Apply the compost fertilizer in agricultural field according to the composition of the soil.

Mapped to AGR/0234/OC6,V2.0

Terminal Outcomes:

- Identify the soil to be fertilized.
- Identify and select the area of the field and crops
- Practice on application of bedwash in field by foliar spraying
- Practice on application of vermiwash in filed by foliar spraying

Duration: *10:00*	**Duration: *20:00***
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
The candidate will be able to describe the followings:- • Studying various steps used in preparation of vermicompost • Studying various steps involved in application of bed wash in field (Dilution by water, foliar spraying and soil application) • Studying various steps involved in application of vermiwash in filed (Dilution by water, foliar spraying and soil application)	The candidate will be able to demonstrate the followings:- • Practice on application of vermicompost based on soil profile, field area and crop types. • Practice on application of bedwash in field by foliar spraying • Practice on application of vermiwash in filed by foliar spraying
Classroom Aids:	
Computer,Projection Equipment,Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Shovel, Spade (kodali), Crowbars, Iron baskets, Dung fork, Buckets, Bamboo baskets, Trowel Water distribution pump, Power operated shredder, Sieving machine with 3 wire mesh sieves- Weighing scale (100 kg capacity), Weighing machine (platform type), Bag sealing machine Culture trays (plastic) (35 cm x 45 cm), Wheel barrows , Kodal (long size), Water spraying machine, Pump set, Drum(plastic), Gumla big size, Finger type Kodal (long size) Hand type Belcha, Iron sieve, Black polythene sheet 20 inch ×15 inch, Jute bag long size Fork Hoe (Nirani), Archara (hand type iron made wire net). Physical rough balance Capacity=50Kg Readability= 1gm, SS Pan size (mm) = 250×330 Magnetic Starrer, with Hot Plate, Thermometer,0degC to 100 deg C, Muffle furnce, size of inner chamber (5''x 5''x 10'')inch, Soxhlet apparatus with six chamber mantle type,flask capacity 250ml, Serological water bath.	

Module 7: Work in real job situation with special emphasis on basic safety and hazards in this domain

Mapped to AGR/0234/*OC7*,V2.0

Terminal Outcomes:

Assessor will check report prepared for this component of training of the course and assess whether competency has been developed to work in the real job situation with special emphasis on basic safety and hazards in this domain. (The trainee is expected to undertake work in actual workplace under any supervisor / contractor for 150 Hours.)

Duration:*00:00*	Duration: *120:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
	• Production jobs as per drawing such as furniture items. • Preparation of utility goods for domestic use by steel wire, preparation of different models with 5mm. M.S. Rods or wire for common structural items - grills, Gratings, Gates etc. • Assessor will check report prepared for this component of training of the course and assess whether competency has been developed to work in the real job situation with special emphasis on basic safety and hazards in this domain. (The trainee is expected to undertake work in actual workplace under any supervisor / contractor for 150 Hours.)
Classroom Aids:	

Module 8: Employability skills

Mapped to DGT/VSQ/N0102, v 1.0

Terminal Outcomes:

1. Demonstrate a comprehensive knowledge of constitutional values and apply them in their actions, decisions, and interactions, thereby upholding the principles of the constitution.
2. Develop proficiency in basic English skills, including reading, writing, listening, and speaking, enabling effective communication in everyday situations.
3. Exhibit proficiency in basic communication skills, including active listening, effective verbal and nonverbal communication, and clarity in expressing ideas, fostering successful interpersonal interactions.
4. Explain financial and legal literacy, including understanding key financial concepts, making informed financial decisions, and navigating legal frameworks related to personal and business finances.
5. Interpret digital tools and technologies, navigating online platforms, and practicing safe and responsible digital behavior.

• Discuss the importance of Employability Skills in meeting the job requirements. Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. Discuss 21st century skills such as Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life. • Use basic English for everyday conversation in different contexts, in person and over the telephone. Read and understand routine information, notes, instructions, mails, letters etc. written in English. Write short messages, notes, letters, e-mails etc. in English. • Demonstrate how to communicate in a well -mannered way with others. Apply verbal and non-verbal communication etiquette and active listening techniques in various settings. Demonstrate working with others in a team • Show how to conduct oneself appropriately with all genders and PwD. • Select financial institutions, products and services as per requirement. Carry out offline and online financial transactions, safely and securely. identify common components of salary and compute income, expenses, taxes, investments etc. • Show how to operate digital devices and use the associated applications and features, safely and securely. Use e-mail and social media platforms and virtual collaboration tools to work effectively. Use the features of word processor, spreadsheets and presentations. Create a biodata. • Identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research. Identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity • Identify different types of customers. Identify and respond to customer requests and needs in a professional manner	
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	

Details Syllabus Content

Detail of Theory Syllabus:

SL NO	CONTENT	DETAILS
1	Types and Roles of organic manures.	(1.1) Information about types of organic manures. (1.2) Information about source of organic manures. (1.3) Knowledge about use of Organic manures in field. (1.4) Knowledge about importance of Organic manures.
2	Importance of vermicompost and earthworms.	(2.1) Understanding and identifying types of earthworm species. (2.2) Knowledge about role of earthworms in soil. (2.3) Comprehending importance of vermicomposting. (2.4) Enumerating benefits of vermicompost.
3	Description and methods of vermicomposting.	Understanding basic principles of various methods of Vermicomposting viz. (3.1) Pit method of vermicomposting. (3.2) Heap method of vermicomposting. (3.3) Poly-vermi method. (3.4) Hanging methods, etc.
4	Selection of vermicompost material and decomposition.	(4.1) Studying various parameters used in selection of raw materials from agricultural source (4.2) Knowledge about various methods of decomposition
5	Preparation procedure of vermicomposting and application of bedwash and vermiwash in the field.	(5.1) Studying various steps used in preparation of vermicompost (5.2) Studying various steps involved in application of bed wash in field (Dilution by water, foliar spraying and soil application) (5.3) Studying various steps involved in application of vermiwash in filed (Dilution by water, foliar spraying and soil application)

Detail of Practical Syllabus:

SL NO	CONTENT	DETAILS
1	Methods of vermi composting.	(1.1) Practice on Pit method of vermicomposting. (1.2) Practice on Heap method of vermicomposting. (1.3) Practice on Poly-vermi method. (1.4) Practice on Hanging methods. (1.5) Enumerating possible risks and hazards in the work environment (1.6) Practising safety exercise.
2	Selection of raw materials and decomposing system.	(2.1) Practice on selecting compostable and non-compostable raw materials. (2.2) Practice on mixing of raw materials in proper proportion. (2.3) Selecting proper method of decomposition from various methods viz.open system, poly system and pit system

3	Selection of earthworms' species and preparation of vermicompost.	(3.1)Practice on selection of commercial earthworm Species based on Morphological characteristics viz. *Eiseniafoetida, Eudriluseuginae, Perionyxexcavatus* (3.2) Practice on preparation of vermicompost using commercial earthworms.
4	Multiplication (Breeding and rearing) of earthworm.	(4.1) Practice on breeding of earthworms in tray and rack. (4.2) Practice on rearing of earthworms in tray and rack. (4.3) Practice on segregating adult earthworms for vermi production.
5	Harvesting, sieving, testing and packaging of vermicompost.	(5.1) Harvesting -Practice on collection of vermi casting from bed. (5.2) Sieving – Practice on sieving vermicompost-identifying cocoon of earthworm for excluding. (5.3) Testing:- Practice on determination of pH, Electrical Conductivity (Na^+, K^+), NPK and Sulphur of vermicompost. (5.4) Observing Physical appearance - Observation of Vermicompost to understand physical appearance and characteristics. (5.5) Packaging- Practice on Packaging of vermicompost in polyethylene bag of 50kg capacity for farmers and small pack for domestic use.
6	Application of vermicompost, bedwash and vermiwash in the field.	(6.1) Practice on application of vermicompost based on soil profile, field area and crop types. (6.2) Practice on application of bedwash in field by foliar spraying (6.3) Practice on application of vermiwash in filed by foliar spraying

Syllabus of Employability Skill:

Introduction to Employability Skills Duration: 1.5 Hours

After completing this programme, participants will be able to:

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship Duration: 1.5 Hours

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that arerequired to become a responsible citizen
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century Duration: 2.5 Hours

5. Discuss importance of relevant 21st century skills.
6. Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptivethinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

Basic English Skills Duration: 10 Hours

8. Show how to use basic English sentences for everyday conversation in different contexts,

in person andover the telephone

9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

Career Development & Goal Setting Duration: 2 Hours

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills Duration: 5 Hours

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion Duration: 2.5 Hours

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy Duration:5 Hours

17. Outline the importance of selecting the right financial institution, product, and service
18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.
20. Discuss the legal rights, laws, and aids

Essential Digital Skills Duration: 10 Hours

21. Describe the role of digital technology in today's life
22. Demonstrate how to operate digital devices and use the associated applications and features, safely andsecurely
23. Discuss the significance of displaying responsible online behavior while browsing, using various socialmedia platforms, e-mails, etc., safely and securely
24. Create sample word documents, excel sheets and presentations using basic features
25. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 7 Hours

26. Explain the types of entrepreneurship and enterprises
27. Discuss how to identify opportunities for potential business, sources of funding and associated financialand legal risks with its mitigation plan
28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
29. Create a sample business plan, for the selected business opportunity

Customer Service Duration: 5 Hours

30. Describe the significance of analyzing different types and needs of customers
31. Explain the significance of identifying customer needs and responding to them in a professional manner.
32. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs Duration: 8 Hours

33. Create a professional Curriculum Vitae (CV)
34. Use various offline and online job search sources such as employment exchanges, recruitment agencies,and job portals respectively
35. Discuss the significance of maintaining hygiene and confidence during an interview
36. Perform a mock interview
37. List the steps for searching and registering for apprenticeship opportunities

Tools and Equipment (For a batch of 20 trainees)

Sl. No	Items Name	Specification	Quantity
1.	Shovel,	Shovel,	8
2.	Spade (kodali),	Spade (kodali),	6
3.	Crowbars,	Crowbars,	8
4.	Iron baskets	Iron baskets	8
5.	Dung fork,	Dung fork,	8
6.	Buckets,	Buckets,	8
7.	Bamboo baskets,	Bamboo baskets,	12
8.	Trowel	Trowel	8
9.	Water distribution pump	Water distribution pump with Plumbing and fitting tools	2 sets
10.	Power operated shredder	Power operated shredder	1
11.	Sieving machine with 3 wire mesh sieves-	Sieving machine with 3 wire mesh sieves- 0.6 m x 0.9 m size - power operated with motor	1
12.	Weighing scale (100 kg capacity)	Weighing scale (100 kg capacity)	2
13.	Weighing machine (platform type)	Weighing machine (platform type)	2
14.	Bag sealing machine	Bag sealing machine	2
15.	Culture trays (plastic) (35 cm x 45 cm)	Culture trays (plastic) (35 cm x 45 cm)	15
16.	Wheel barrows -	Wheel barrows -	3
17.	Kodal (long size)	Kodal (long size)	6
18.	Water spraying machine	Water spraying machine	4
19.	Pump set	Pump set 1hp	2
20.	Drum(plastic)	Drum(plastic)	6
21.	Gumla big size	Gumla big size	8
22.	Finger type Kodal (long size)	Finger type Kodal (long size)	4

23.	Hand type Belcha	Hand type Belcha	6
24.	Iron sieve	Iron sieve	6
25.	Black polythene sheet 20 inch ×15 inch	Black polythene sheet 20 inch ×15 inch	10
26.	Jute bag long size	Jute bag long size	10
27.	Fork Hoe (Nirani)	Fork Hoe (Nirani)	8
28.	Archara (hand type iron made wire net)	Archara (hand type iron made wire net)	12
29.	Plastic bag 10Kg capacity	Plastic bag 10Kg capacity	30
30.	Hot air oven (24''×24''×24'') with blower	Hot air oven (24''×24''×24'') with blower digital temp(Multispan) and time control, inside made of 304SS of 20gage, out side of MS with powder coated finish, ball catcher heavy door. Three side heating elements, Standard double wall febrication, Inner chamber made of highly polished stainless steel sheet, Exterior fabricated out of thick mild steel duly finished in white stoving enamel with mat finished colour combinations, Quick and uniform heating in range of 50°C to 250°C ±2°C controlled by capillary type thermostat, L-shaped thermometer is built-in type, Control panel is provided with selector switch of high or low rates of power thermostat control knob and indicators for mains & thermostat,	1
31.	Kjheldhal distillation unit 500ml capacity.	Kjheldhal distillation unit 500ml capacity provided with condenser rack, stand, clamp, six test heater type. Kjheldhal flask 500ml & 1.5ft condensers, connector, adaptor, dropper funnel with stop cock of proper size (borosil), all have standard joint B24/B29 and rubber tube needed for water connection and water discharge through condensers. Each heater made by high quality nicrom wire with cotton cover and thermostat controlled arrangement.	1
32.	Kjheldhal digestion unit, lab std 500ml cap.	Kjheldhal digester Kjheldhal digestion unit, lab std 500ml cap. six test heater type with Kjheldhal flask 500ml(borosil) and supporting stand and clamp. Each heater made by high quality nicrom wire and thermostat controlled arrangement.	1
33.	Rectangular hot plate of, (10''×16''×9'')	Rectangular hot plate of, (10''×16''×9'') 304SS top of 10 gauge/fully SS body of 18 gauge, digital temperature indicator cum controller in one side.	1
34.	Digital pH Meter,	Digital pH Meter, Range : 0 to 14pH (mV upto 1999mV), Resolution : 0.01pH (±1mV), Accuracy : 0.01pH, ±1 digit (1mV, •±1digit), Temperature	2

		compensation : 0°C to 100°C (manual), 4 digit LED display with automatic polarity and decimal indications, With one combination electrode, stand , clamp, buffers, dust cover & manual. Supply with pH 4.01 buffer, pH 7.00 buffer pH 10.01 buffer	
35.	High precision balance Capacity=1000gm	High precision balance Capacity=1000gm Readability=0.001 SS Pan size (mm) = 128×128	1
36.	High precision balance Capacity=6100gm	High precision balance Capacity=6100gm Readability=0.01 SS Pan size (mm) = 165×165	1
37.	Digital electronics balance ,capacity 0.1mg-120gm,	Digital electronics balance ,capacity 0.1mg-120gm, accuracy 0.0001gm, pan dia 80mm	1
38.	Digital electronics balance, capacity : 5mg-210gm,	Digital electronics balance, capacity : 5mg-210gm, accuracy 0.001gm, SS pan	1
39.	Bench conductivity/tds/temp. meter	Large screen that displays Conductivity or TDS readings with Temperature in ºC or ºF Ready indicator let you know when readings are stable Selectable cell constant Auto-ranging across 5 Conductivity and TDS ranges Up to 5-point push button calibration Non-volatile memory holds up to 100 data points Integral electrode holder Specifications Conductivity Range 0.01 to 200.0 mS/cm Resolution 0.01 µS; 0.1 µS ; 1 µS ; 0.01 mS ; 0.1 mS * Accuracy ±1% Full scale TDS Range 0.01 to 100 ppt @ 0.5 TDS factor (to 200 ppt @ 1.0 TDS factor) Resolution 0.01 ppm; 0.1 ppm ; 1 ppm ; 0.01 ppt ; 0.1 ppt # Accuracy ± 1% Full scale + 1 digit Calibration Points (Cond. / TDS) 5 points Temperature Range 0.0 to 100.0 ^{0}C / 32.0 to 212.0 ^{0}F Resolution/Accuracy 0.1^0 C / 0.1 ^{0}F ; ± 0.5 ^{0}C /± 0.9 ^{0}F Built-in Electrode Arm Yes Temperature Coefficient 0.00 to 0.00% Temperature Normalization 15 to 30 °C Memory 100 Data sets Electrode Included, ultem body ECCONSEN9501D,cell constant 1.0, 1 m cable Power Requirement	1

		Included, 100 /240VAC SMPS Power Adapter with US/UK/EUR/Japan plug ,9V,6W, CENTRE +ve Conductivity Cell For Low Range Conductivity Measurements Use A Cell Of K = 0.1 For Low Range Measurements (Below 20 µS or 10 ppm) Electrode, Conductivity, K=0.1, Platinum, 12mm x 110mm, 30K Thermistor, 8 pin din, Conductivity Probe Cell Constant K=1.0 2 stainless steel rings ultem-body Conductivity electrode, ATC, cell constant K=1.0, 16 x 144 mm,8-pin connector, 1 m cable (700 or 2700 series) Conductivity Calibration Solutions 100 µS KCL,500 µS KCL,1413 µS KCL, 2764 µS KCL TDS Calibration Solutions 50 ppm,300 ppm, 1000 ppm, 3000 ppm	
40.	Physical rough balance Capacity=50Kg Readability= 1gm SS Pan size (mm) = 250×330	Physical rough balance Capacity=50Kg Readability= 1gm SS Pan size (mm) = 250×330	2
41.	Magnetic Starrer, with Hot Plate,	Magnetic Starrer, with Hot Plate, with Stepless Speed control &S.S. body and top. Stirring capacity 5lt liquid. It utilises magnetic filed created by a Heavy duty permanent magnet which induces variable speed stirring action. Stirring is accomplished by means of small teflon rotor, which when placed to be stirred is capable or rotation by magnetic field applied from below the container. Fitted with pilot lamp.	1
42.	Thermometer,0degC to 100 deg C glass	Thermometer,0degC to 100 deg C glass	4
43.	Horizontal mechanical rotary shaker, 250mlx24 flask ,	Horizontal mechanical rotary shaker, 250mlx24 flask , with 304 SS of 20 gauge shaking plate and flask holder made of SS ring in round shape, digital rpm display controller.	1
44.	Muffle furnce, size of inner chamber (5''x 5''x 10'')inch,	Muffle furnce, size of inner chamber (5''x 5''x 10'')inch, for 1000˚C working, outer casing made of heavy duty M.S. materials and sheet duly painted finished, heating elements are better quality. For 1000˚C working 3.0KW.	1
45.	Soxhlet apparatus with six chamber mantle type,flask capacity 250ml,	Soxhlet apparatus with six chamber mantle type,flask capacity 250ml, 2 vertical,2 horizontal rods with adaptor and screw to hold flask ,six test heater of high quality nicrom wire with cotton cover including soxhlet apparatus glass parts, RB flask of 250ml , extractor, condenser, silicon tube.	1
46.	Serological water bath,	Serological water bath, Double wall insulation, total 304SS of 20gauge(inner and outer), capacity (12x250ml) (16''×12''×10'') 304SS lid, Ambient to 110 °C and digital temperature indicator. one outlet with ball valve	1

47.	centrifuge,	centrifuge, maximum rotating speed limit 5250 rpm with angle rotor head 15ml × 16 capacity	1
48.	Concentric ring water bath,	Concentric ring water bath, Double wall insulation, total 304SS of 20gauge(inner and outer),, capacity of 12 holes(16''×12''×6''), digital temperature controller , one outlet with ball valve.	1
49.	Scanning visible Spectro Photo Meter Wavelength 340- 990nm Detector= silicon photo diode	Scanning visible Spectro Photo Meter Wavelength 340-990nm Detector= silicon photo diode	1
50.	Digital Turbidity meter	Digital Turbidity meter Range = 0-1NTU, 0-10NTU,0-100NTU,0-1000NTU accuracy ; ±2% of F.S in 0-1 & 0-1000NTU, ±1% of F.S in 0-10 & 0-100NTU	1
51.	Water Spraying Machine	Water Spraying Machine 10Lt Capacity	2
52.	Digital flame photometer	Digital flame photometer, Specification: Range: Element Channel Low Medium High Na 1 100ppm 10ppm 1ppm K 2 100ppm 10ppm 1ppm Ca 1 -------- ------- 15ppm Li 2 -------- ------- 10ppm Nebulizer : concentric suction type with stainless steel capillary: Flame system: Burner: Stainless steel Fuel gas: LPG Oxidant: Dry oil free air Regulator: Stainless steel needle type Detector : Photodiode Readout: 21\2 digit 7 segment LED display of 12.7 mm height with polarity indication.	1
53.	Test tube,borosilicate glass 18x15 ml	Test tube ,borosilicate glass 18x15 ml Heat Resistant, Annealing Surface	50
54.	Test tube,borosilicate glass 15x15 ml	Test tube ,borosilicate glass 15x15 ml Heat Resistant, Annealing Surface	50
55.	Beaker, graduated , borosilicate glass 1000ml	Beaker, graduated, borosilicate glass 1000ml Heat Resistant, Annealing Surface	5
56.	Beaker, graduated , borosilicate glass 500ml	Beaker, graduated, borosilicate glass 500ml Heat Resistant, Annealing Surface	5
57.	Beaker, graduated , borosilicate glass 250ml	Beaker, graduated, borosilicate glass 250ml Heat Resistant, Annealing Surface	10

58.	Beaker, graduated , borosilicate glass 100ml	Beaker, graduated, borosilicate glass 100ml Heat Resistant, Annealing Surface	10
59.	Conical flask, graduated , borosilicate glass 500ml	Conical flask, graduated , borosilicate glass 500ml Heat Resistant, Annealing Surface	5
60.	Conical flask, graduated , borosilicate glass 250ml	Conical flask, graduated , borosilicate glass 250ml Heat Resistant, Annealing Surface	10
61.	Conical flask, graduated , borosilicate glass 100ml	Conical flask, graduated , borosilicate glass 100ml Heat Resistant, Annealing Surface	10
62.	Pipette, graduated , borosilicate glass 50ml	Pipette, graduated , borosilicate glass 50ml Heat Resistant, Annealing Surface	5
63.	Pipette, graduated , borosilicate glass 25ml	Pipette, graduated , borosilicate glass 25ml Heat Resistant, Annealing Surface	5
64.	Pipette, graduated , borosilicate glass 10ml	Pipette, graduated , borosilicate glass 10ml Heat Resistant, Annealing Surface	5
65.	Pipette, graduated , borosilicate glass 5ml	Pipette, graduated , borosilicate glass 5ml Heat Resistant, Annealing Surface	5
66.	Pipette, graduated , borosilicate glass 2ml	Pipette, graduated , borosilicate glass 2ml Heat Resistant, Annealing Surface	5
67.	Pipette, graduated , borosilicate glass1ml	Pipette, graduated , borosilicate glass1ml Heat Resistant, Annealing Surface	5
68.	Burette 50ml , graduated , borosilicate glass (with ptfe stoppered),	Burette 50ml , graduated , borosilicate glass Heat Resistant, Annealing Surface (with ptfe stoppered),	6
69.	Volumetric flask, graduated, borosilicate glass 1000ml	Volumetric flask, graduated , borosilicate glass 1000ml Heat Resistant, Annealing Surface	6
70.	Volumetric flask ,graduated , borosilicate glass 500ml	Volumetric flask ,graduated , borosilicate glass 500ml Heat Resistant, Annealing Surface	5
71.	Volumetric flask ,graduated , borosilicate glass 250 ml	Volumetric flask ,graduated , borosilicate glass 250ml Heat Resistant, Annealing Surface	10

72.	Volumetric flask ,graduated , borosilicate glass 100ml	Volumetric flask ,graduated , borosilicate glass 100ml Heat Resistant, Annealing Surface	10
73.	Measuring cylinder, graduated , borosilicate glass 1000ml	Measuring cylinder, graduated , borosilicate glass 1000ml Heat Resistant, Annealing Surface	5
74.	Measuring cylinder ,graduated , borosilicate glass 500ml	Measuring cylinder ,graduated , borosilicate glass 500ml Heat Resistant, Annealing Surface	5
75.	Measuring cylinder ,graduated , borosilicate glass 250ml	Measuring cylinder ,graduated , borosilicate glass 250ml Heat Resistant, Annealing Surface	5
76.	Measuring cylinder ,graduated , borosilicate glass 100ml	Measuring cylinder ,graduated , borosilicate glass 100ml Heat Resistant, Annealing Surface	5
77.	Measuring cylinder ,graduated , borosilicate glass 50ml	Measuring cylinder ,graduated , borosilicate glass 50ml Heat Resistant, Annealing Surface	5
78.	Measuring cylinder ,graduated , borosilicate glass 25ml	Measuring cylinder ,graduated , borosilicate glass 25ml Heat Resistant, Annealing Surface	5
79.	Measuring cylinder ,graduated , borosilicate glass 10ml	Measuring cylinder ,graduated , borosilicate glass 10ml Heat Resistant, Annealing Surface	5
80.	Funnel 60 deg angle long stem , borosilicate glass 75mm	Funnel 60 deg angle long stem , borosilicate glass 75mm Heat Resistant, Annealing Surface	10
81.	Glass rod 150 mm long, 5-6 mm dia borosilicate glass	Glass rod 150 mm long, 5-6 mm dia borosilicate glass Heat Resistant, Annealing Surface	20
82.	Porcelain basin 100 mm dia	Porcelain basin 100 mm dia Heat Resistant,	6
83.	Mortar/ pestle(porcelain) 100 mm	Mortar/ pestle(porcelain) 100 mm	3
84.	Reagent bottle, borosilicate glass 250 ml	Reagent bottle, borosilicate glass 250ml Heat Resistant, Annealing Surface	10
85.	Reagent bottle, borosilicate glass	Reagent bottle, borosilicate glass 500ml Heat Resistant, Annealing Surface	10

	500ml		
88.	Beaker, (Plastic)graduated, 1000ml	Beaker, (Plastic)graduated, 1000ml	10
89.	Beaker, (Plastic)graduated, 500ml	Beaker, (Plastic)graduated, 500ml	10
90.	Beaker, (Plastic)graduated, 250ml	Beaker, (Plastic)graduated, 250ml	10
91.	Beaker, (Plastic)graduated, 100ml	Beaker, (Plastic)graduated, 100ml	10
92.	Beaker, (Plastic)graduated, 50ml	Beaker, (Plastic)graduated, 50ml	10
93.	Plastic bucket, 5lit	Plastic bucket, 5lit, heavy gauge nylon made	2
94.	Plastic bucket, 9lit	Plastic bucket, 9lit, heavy gauge nylon made	2
95.	Plastic bucket, 15lit	Plastic bucket, 15lit, heavy gauge nylon made	2
96.	Tray ,plastic, (12''×10'')	Tray ,plastic, (12''×10''), heavy gauge nylon made	6
97.	Tray ,plastic, (17''×12'')	Tray ,plastic, (17''×12''), heavy gauge nylon made	6
98.	Tray ,plastic, (19''×13'')	Tray ,plastic, (19''×13''), heavy gauge nylon made	3
99.	Spoon Spatula 6'' long ,SS	Spoon Spatula non-magnetic stainless steel with high polish one side spoon , 6'' long ,SS	6
100.	Spoon Spatula 8'' long ,SS	Spoon Spatula non-magnetic stainless steel with high polish one side spoon , 8'' long ,SS	6
101.	Plane Desiccators Dia 300mm , plastic made	Desiccators Dia 300mm, plastic made	2
102.	Test tube holder (heavy)	Test tube holder (heavy)	10
103.	Burette stand with base and double clamp, (plastic PP made)	Burette stand with base and double clamp, (plastic PP made)	6
104.	Burette stand with base and single clamp, (plastic PP	Burette stand with base and single clamp, (plastic PP made)	6
105.	Pipette stand (plastic PP made) (Horizontal)	Pipette stand (plastic PP made) (Horizontal)	4
106.	Pipette stand (plastic PP made)	Pipette stand (plastic PP made) (Vertical)	4

	(Vertical)		
107.	Burette stand with base and single clamp, (plastic PP made)	Burette stand with base and single clamp, (plastic PP made)	6
108.	Test tube stand (plastic PP made) Dia 20mm	Test tube stand (plastic PP made) Dia 20mm	6
109.	Test tube stand (plastic PP made) Dia 25mm	Test tube stand (plastic PP made) Dia 25mm	6
110.	Wash bottle, (plastic), 500 ml	Wash bottle, (plastic), 500 ml	12
111.	Filter stand with base and double clamp, (plastic PP made)	Filter stand with base and double clamp, (plastic PP made)	6
112.	pH Paper	pH range 1 to 14	10
113.	pH Buffer capsule/tablet, 10 caps in each pack,(pH 4, pH 7, pH 9.2)	pH Buffer capsule/tablet, 10 caps in each pack,(pH 4, pH 7, pH 9.2) Highly Pure, Analytical Grade	3
114.	Sodium hydroxide pallet,500gm	Sodium hydroxide pallet,500gm Highly Pure, Analytical Grade	1
115.	Concentrated HClacid,1 lit	Concentrated HCl acid,2.5 lit Highly Pure, Analytical Grade	1
116.	Potassium Nitrate,500gm	Potassium Nitrate,500gm Highly Pure, Analytical Grade	1
117.	Potassium di hydrogen phosphate,500gm	Potassium di hydrogen phosphate,500gm Highly Pure, Analytical Grade	1
118.	Di potassium hydrogen phosphate,500gm	Di potassium hydrogen phosphate,500gm Highly Pure, Analytical Grade	1
119.	Potassium chloride,500gm	Potassium chloride,500gm Highly Pure, Analytical Grade	1
120.	Sodium Chloride 500 gm	Sodium chloride,500gm Highly Pure, Analytical grade	1
121.	Petrolium Ethar, 500ml (60^0C-80^0C)	Petrolium Ethar, 500ml (60^0C-80^0C) Highly Pure, Analytical Grade	2
122.	Phenolphthalein indicator(1% solution), 125 ml	Phenolphthalein indicator(1% solution), 125 ml Highly Pure, Analytical Grade	2
123.	Ammonium molybdet,pure,100gm	Ammonium molybdet,pure,100gm Highly Pure, Analytical Grade	1

124.	Concentrated Sulphuric acid,1 lit	Concentrated Sulphuric acid,1 lit Highly Pure, Analytical Grade	1
125.	Potassium di chromate,500gm	Potassium di chromate,500gm Highly Pure, Analytical Grade	1
126.	Sodium bicarbonate,500gm	Sodium bicarbonate,500gm Highly Pure, Analytical Grade	1
127.	Mercuric sulphate,25gm	Mercuric sulphate,25gm Highly Pure, Analytical Grade	1
128.	Silver nitrate,25 gm	Silver nitrate,25 gm Highly Pure, Analytical Grade	1
129.	Boric acid (Crystal) ,500 gm	Boric acid (Crystal) ,500 gm Highly Pure, Analytical Grade	1
130.	Sodium Nitrate,500gm	Sodium Nitrate,500gm Highly Pure, Analytical Grade	1

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
CTS/ATS	Horticulture	5	Vermi composting or organic farming	1	Organic farming / vermicomposting in any agri farm or own farm	NA
B.Sc	Agriculture	3				
M.Sc	Agriculture	2				
B.com	Commerce	3				

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: " Vermi Composter" mapped to QP: STC - AGR/NSQF-2022/0234". Minimum accepted score is 80%.	Recommended that the Trainer is certified for the Job Role: "Trainer (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2601, v2.0". Minimum accepted score is 80%

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
CTS/ATS	Horticulture	5	Vermi compostin g or organic farming	1	Organic farming / vermicomposti ng in any agri farm or own farm	NA
B.Sc	Agriculture	3				
M.Sc	Agriculture	3				
B.com	Commerce	3				

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: " Vermi Composter" mapped to QP: STC - AGR/NSQF-2022/0234". Minimum accepted score is 80%.	Recommended that the Assessor is certified for the Job Role: "Assessor (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2701, v2.0". Minimum accepted score is 80%

Assessment Strategy

Assessment will be based on the concept of Independent Assessors empaneled with West Bengal State Council of Technical & Vocational Education & Skill Development (WBSCT&VE&SD), identified, selected, trained and certified on Assessment techniques. These Assessors would be aligned to assess as per the laid down criteria.

WBSCT&VE&SD would conduct assessment only at the training centers or designated testing centers authorized by WBSCT&VE&SD.

Ideally, the assessment will be a continuous process comprising of two distinct steps:

A. Continuous assessment by Trainers
B. Term end /Final Assessment by WBSCT&VE&SD

Each National Occupational Standard (NOS) in the respective QPs will be assigned weightage. Each Performance Criteria in the NOS will be assigned marks for theory and/or practical based on relative importance and criticality of function.

This will facilitate preparation of question bank / paper sets for each of the QPs. Each of these papers sets/question banks created by subject matter experts through WBSCT&VE&SD, especially with regard to the practical test and the defined tolerances, finish, accuracy etc.

The following tools are proposed to be used for final assessment:

i. Written Test: This will comprise of (i) True/False Statements and/or (ii)Multiple Choice Questions and/or (iii) Matching Type Questions. Online system for this will be preferred.
ii. Practical Test: This will comprise a test job to be prepared as per project briefing following appropriate working steps, using necessary tools, equipment and instruments. Through observation it will be possible to ascertain candidate's aptitude, attention to details, quality consciousness etc.

Structured Viva-voce: This tool will be used to assess the conceptual understanding and the behavioral aspects as regards the job role and the specific task at hand.

Marks distribution as per outcome

Course Name	Sr No	Outcome No.	Outcome Name	Th Hrs	Pr Hrs	Total marks Th	Total marks Pr
Vermi Composter	1	AGR/0234/OC1,V2.0	Identify the species of earthworm capable for producing vermi compost from agriculture waste.	10	20	24	60
	2	AGR/0234/OC2,V2.0	Construct the compost pit and bed with Pit method.	10	20	24	60
	3	AGR/0234/OC3,V2.0	Prepare vermin and other compost.	10	20	26	60
	4	AGR/0234/OC4,V2.0	Collect the vermi wash, analyse the composition and apply to the field	10	20	24	60
	5	AGR/0234/OC5,V2.0	Pack vermi compost and other compost for transportation	10	20	24	60
	6	AGR/0234/0C6,V2.0	Apply the compost fertilizer in agricultural field according to the composition of the soil.	10	20	28	60
	7	AGR/0234/OC7,V2.0	Work in real job situation with special emphasis on basic safety and hazards in this domain.	0	120	0	440
	8	DGT/VSQ/N0102	Employability Skills- 60 hrs.	60	0	50	0
	TOTAL Theory 60 Hrs, Practical 120 Hrs, OJT 120 Hrs, Employability Skill 60 Hrs					200	800

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to Be known and/or understood in order to accomplish or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training Outcome is specified in terms of knowledge, understanding(theory)and skills (practical application).
OJT(M)	On-the-job training(Mandatory);trainees are mandated to complete specified hours of training on site
OJT(R)	On-the-job training(Recommended);trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psycho motor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do **upon the completion of the training**.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do **upon the completion of a module.** A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards