



QUALIFICATION FILE

VERMI COMPOSTER

✓ Short Term Training (STT) Long Term Training (LTT) Apprenticeship

Upskilling Dual/Flexi Qualification ✓ For ToT ✓ For ToA

✓ General Multi-skill (MS) Cross Sectoral (CS) Future Skills OEM

NCrF/NSQF Level: 3

Submitted By: West Bengal State Council of Technical & Vocational Education and Skill Development

Submitting Body Name> 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

Submitting Body Contact Details:

Position in the organization: Chief Administrative Officer

Address if different from above: Same as above

Tel number(s): 033-2340-3717

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Section 1: Basic Details

1. Qualification Name	Vermi Composter STC - AGR/NSQF-2022/0234																
2. Sector/s	Agriculture																
3. Type of Qualification: <input type="checkbox"/> New <input checked="" type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: <i>(change to previous, once approved)</i> STC - AGR/NSQF-2018/804,	Qualification Name of existing/previous version: Vermi Composter															
4. a. OEM Name b. Qualification Name <i>(Wherever applicable)</i>	NA																
5. National Qualification Register (NQR) Code &Version <i>(Will be issued after NSQC approval)</i>	QG-03-AG-00366-2023-V2-WBSC Version 2.0	6. NCrF/NSQF Level: 3															
7. Award (Certificate/Diploma/Advance Diploma/ Any Other <i>(Wherever applicable specify multiple entry/exits also & provide details in annexure)</i>	Certificate																
8. Brief Description of the Qualification	A Vermi composter farmer produces enough manure for organic farming. He or she produces compost through aerobic microorganisms. A Vermi-composter analyses the nutrition value of compost to retain the fertility in the soil.																
9. Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	Entry Qualification & Relevant Experience: <table border="1" data-bbox="757 927 1646 1362"> <thead> <tr> <th data-bbox="757 927 831 1023">S. No.</th> <th data-bbox="831 927 1294 1023">Academic/Skill Qualification (with Specialization - if applicable)</th> <th data-bbox="1294 927 1646 1023">Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td data-bbox="757 1027 831 1062">1</td> <td data-bbox="831 1027 1294 1062">Grade 10</td> <td data-bbox="1294 1027 1646 1062">Nil</td> </tr> <tr> <td data-bbox="757 1067 831 1233">2</td> <td data-bbox="831 1067 1294 1233">Grade 8 pass and pursuing continuous schooling in regular school with vocational subject</td> <td data-bbox="1294 1067 1646 1233">Nil</td> </tr> <tr> <td data-bbox="757 1238 831 1297">3</td> <td data-bbox="831 1238 1294 1297">Grade 8 Pass</td> <td data-bbox="1294 1238 1646 1297">2 yrs</td> </tr> <tr> <td data-bbox="757 1302 831 1362">4</td> <td data-bbox="831 1302 1294 1362">5th Grade Pass</td> <td data-bbox="1294 1302 1646 1362">5 yrs</td> </tr> </tbody> </table>		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Grade 10	Nil	2	Grade 8 pass and pursuing continuous schooling in regular school with vocational subject	Nil	3	Grade 8 Pass	2 yrs	4	5th Grade Pass	5 yrs
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)															
1	Grade 10	Nil															
2	Grade 8 pass and pursuing continuous schooling in regular school with vocational subject	Nil															
3	Grade 8 Pass	2 yrs															
4	5th Grade Pass	5 yrs															

10 Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	12	11. Common Cost Norm Category (I/II/III) (wherever applicable): NA																		
12 Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																			
13 Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<p><input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended</p> <table border="1" data-bbox="757 384 1854 555"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>120</td> <td>120</td> <td>120</td> <td></td> <td>360</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>(Refer Blended Learning Annexure for details)</p>		Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	120	120	120		360	Online					
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)															
Classroom (offline)	120	120	120		360															
Online																				
14 Aligned to NCO/ISCO Code/s (if no code is available mention the same)	6111.0100																			
15 Progression path after attaining the qualification (Please show Professional and Academic progression)	<p>Horizontal Progression:</p> <ol style="list-style-type: none"> Mushroom-Cultivator (L-3) Bio Gas and Bio slurry Technician (L-3) <p>Vertical Progression:</p> <ol style="list-style-type: none"> Vermicompost Producer (L-4) Organic Grower (L-4) 																			
16 Other Indian languages in which the Qualification & Model Curriculum are being submitted	NA																			
17 Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:																			
18 Is the Job Role Amenable to Persons with Disability	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", specify applicable type of Disability:																			
19 How Participation of Women will be Encouraged	Women as part of self-help groups take part in this training and then go for self-employment as well as wage employment																			
20 Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																			
21 Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																			

22 Name and Contact Details of Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Saequa Monazza , Chief Administrative Officer Email: caowbsctvesd@gmail.com 033-2340-3717 Website: sctvesd.wb.gov.in	Contact No.:
23 Final Approval Date by NSQC: 3.5.2023	24. Validity Duration: 3 years	25. Next Review Date 3.5.2026

NSQC Approved

Section 2: Module Summary

NOS/s of Qualifications

Mandatory NOS/s:

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/ NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks										
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)					
1.	Identify the species of earthworm capable for producing vermi compost from agriculture waste.	AGR/0234/OC1 ,V2.0	Core	3	1	10	20			30	24	60			84	8.4%					
2.	Construct the compost pit and bed with Pit method.	AGR/0234/OC2 ,V2.0	Core	3	1	10	20			30	24	60			84	8.4%					
3.	Prepare vermin and other compost.	AGR/0234/OC3 ,V2.0	Core	3	1	10	20			30	26	60			86	8.6%					
4.	Collect the vermi wash, analyse the composition and apply to the field	AGR/0234/OC4 ,V2.0	Core	3	1	10	20			30	24	60			84	8.4%					
5.	Pack vermi compost and other compost for transportation	AGR/0234/OC5 ,V2.0	Core	3	1	10	20			30	24	60			84	8.4%					
6.	Apply the compost fertilizer in agricultural field according to the composition of the soil.	AGR/0234/OC6 ,V2.0	Core	3	1	10	20			30	28	60			88	8.8%					
7.	Work in real job situation with special emphasis on basic safety and hazards in this domain.	AGR/0234/OC7 ,V2.0	Core	3	4	0	0	120		120	0	0	440		440	44%					
8.	Employability Skills- 60 hrs.	DGT/VSQ/N0102	Core	3	2	60	0			60	50	0			50	5%					
Duration (in Hours) / Total Marks										12	120	120	120		360	200	360	440		1000	

Elective NOS/s: NA

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s: NA

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: Th. 60% & Pr70% (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: NA % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer’s Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	CTS/ATS (Horticulture) 5 years’ experience OR B.sc (Agriculture) 3 years’ experience OR M.Sc ((Agriculture) 2 years’ experience OR B.Com (Commerce) 3 years’ experience AND 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%
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2.	Master Trainer’s Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	CTS/ATS (Horticulture) 5 years’ experience OR B.sc (Agriculture) 3 years’ experience OR M.Sc ((Agriculture) 2 years’ experience OR B.Com (Commerce) 3 years’ experience AND Certified for Job Role: “ Vermi Composter” mapped to QP: STC - AGR/NSQF-2022/0234”.Minimum accepted score is 80%. AND Certified on any domain skill of NSQF Level 5 with experience in training activities in similar field.
3.	Tools and Equipment Required for Training	√ <input type="checkbox"/> Yes <input type="checkbox"/> No (If “Yes”, details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NO

Section 4: Assessment Related

1.	Assessor’s Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	CTS/ATS (Horticulture) 5 years’ experience OR B.sc (Agriculture) 3 years’ experience OR M.Sc ((Agriculture) 2 years’ experience OR B.Com (Commerce) 3 years’ experience AND 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%
2.	Proctor’s Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	CTS/ATS (Horticulture) 5 years’ experience OR B.sc (Agriculture) 3 years’ experience OR M.Sc ((Agriculture) 2 years’ experience OR B.Com (Commerce) 3 years’ experience
3.	Lead Assessor’s/Proctor’s Qualification and experience in	CTS/ATS (Horticulture) 5 years’ experience OR

	relevant sector (in years) (as per NCVET guidelines)	B.sc (Agriculture) 3 years' experience OR M.Sc ((Agriculture) 2 years' experience OR B.Com (Commerce) 3 years' experience
4.	Assessment Mode (Specify the assessment mode)	Offline
5.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input type="checkbox"/> Yes <input type="checkbox"/> No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): No
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): NO
3.	Government /Industry initiatives/ requirement (Yes/No): No
4.	Number of Industry validation provided: 3
5.	Estimated nos. of persons to be trained and employed: 1200 per year
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors (Mandatory)	Annexure 1
2.	Annexure: List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Annexure 2
3.	Annexure: Detailed Assessment Criteria (Mandatory)	Annexure 6
4.	Annexure: Assessment Strategy (Mandatory)	Annexure 7
5.	Annexure: Blended Learning (Mandatory, in case selected Mode of delivery is "Blended)	NA

	<i>Learning")</i>	
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	NA
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	<i>Annexure 8</i>
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Yes
9.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	<i>Yes in Q file</i>
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	<i>Yes in Q File</i>
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	<i>Yes in Model Curriculum</i>
12.	Any other document you wish to submit:	NO

Annexure 1: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	<ul style="list-style-type: none"> Prepare vermiculture with earthworm and construct bed for Vermicomposting with specific measurement 	<ul style="list-style-type: none"> User/individual on the job needs to know and understand: Plan and organize work of vermiculture and vermicomposting and analyze analyse the components of compost. Basic concepts of related to work productivity including waste reduction, efficient material usage and optimization of time. 	3
Professional and Technical Skills/ Expertise/ Professional Knowledge	<ul style="list-style-type: none"> Explain and Demonstrate Professional Knowledge include vermicomposting method, compost collection and packaging, application of compost in agricultural field. 	<ul style="list-style-type: none"> User/ individual needs to have an understanding of basic principles and knowledge about the preparation of vermicompost and application of the compost in the agricultural field. 	3
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	<ul style="list-style-type: none"> Record expenses incurred during construction and procurement of materials. Document work related activities in appropriate work-sheet, register, etc. on 	<ul style="list-style-type: none"> User/ Individual demonstrate the practical skill about vermicomposting and their application range in agricultural field. 	3

	<p>number of beds, stage of work completed, dimensional and quantitative details of bed preparations, quantity of worms, stage of work completed, volume of feeds, watering duration, temperature monitoring etc.</p> <ul style="list-style-type: none"> • Record details of work related problems/observations and maintain pit of corrective measures. • Record expenses incurred during maintenance of unit and procurement of earthworms. • Record details of work related problems/observations and maintain track of corrective measures. 		
Broad Learning Outcomes/Core Skill	<ul style="list-style-type: none"> • Communicate effectively • Fundamental knowledge of computer and basic understanding personal banking 	<ul style="list-style-type: none"> • User / Individual gathers knowledge of soft skill and fundamental knowledge of computer which enable the user/ individual to work in a team in a collaborative manner. 	3
Responsibility	<ul style="list-style-type: none"> • Check-up procedures to ensure that project objectives are finished within specified time frames are developed. • Read and interpret warnings/instructions given on tools and materials such as chemical fertilizer or insecticide. • Read circulars/notifications issued by appropriate authority or concerned agency on information related to work. 	<ul style="list-style-type: none"> • User / Individual is required to carry out functions such as interpreting warnings/instructions given on tools and materials needed in vermicomposting. In these activities user / individual is doing the task under supervision. 	3

Annexure 2: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

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	Black polythene sheet 20 inch x15 inch	10

Sl. No	Items Name	Specification	Quantity
	×15 inch		
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 fabrication, 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),	2

Sl. No	Items Name	Specification	Quantity
		Temperature 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
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	1

Sl. No	Items Name	Specification	Quantity																														
		duly painted finished, heating elements are better quality. For 1000°C working 3.0KW.																															
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''x12''x10'') 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 x 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''x12''x6''), 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: <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Element</td> <td style="width: 10%;">Channel</td> <td style="width: 15%;">Low</td> <td style="width: 15%;">Medium</td> <td style="width: 15%;">High Na</td> <td style="width: 10%; text-align: right;">1</td> </tr> <tr> <td></td> <td>100ppm</td> <td>10ppm</td> <td></td> <td>1ppm K</td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>100ppm</td> <td>10ppm</td> <td>1ppm Ca</td> <td></td> </tr> <tr> <td></td> <td>1</td> <td>-----</td> <td>-----</td> <td>15ppm</td> <td></td> </tr> <tr> <td>Li</td> <td>2</td> <td>-----</td> <td>-----</td> <td>10ppm</td> <td></td> </tr> </table> Nebulizer : concentric suction type with stainless steel capillary: Flame system: Burner: Stainless steel Fuel gas: LPG	Element	Channel	Low	Medium	High Na	1		100ppm	10ppm		1ppm K			2	100ppm	10ppm	1ppm Ca			1	-----	-----	15ppm		Li	2	-----	-----	10ppm		1
Element	Channel	Low	Medium	High Na	1																												
	100ppm	10ppm		1ppm K																													
	2	100ppm	10ppm	1ppm Ca																													
	1	-----	-----	15ppm																													
Li	2	-----	-----	10ppm																													

Sl. No	Items Name	Specification	Quantity
		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.	
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 ,	Pipette, graduated , borosilicate glass 1ml Heat Resistant, Annealing	5

Sl. No	Items Name	Specification	Quantity
	borosilicate glass 1ml	Surface	
68.	Burette 50ml , graduated , borosilicate glass (with ptfе stoppered),	Burette 50ml , graduated , borosilicate glass Heat Resistant, Annealing Surface (with ptfе 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

Sl. No	Items Name	Specification	Quantity
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 250ml	Reagent bottle, borosilicate glass 250ml Heat Resistant, Annealing Surface	10
85.	Reagent bottle, borosilicate glass 500ml	Reagent bottle, borosilicate glass 500ml Heat Resistant, Annealing Surface	10
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''x10'')	Tray ,plastic, (12''x10''), heavy gauge nylon made	6
97.	Tray ,plastic, (17''x12'')	Tray ,plastic, (17''x12''), heavy gauge nylon made	6
98.	Tray ,plastic, (19''x13'')	Tray ,plastic, (19''x13''), 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	Spoon Spatula non-magnetic stainless steel with high polish one	6

Sl. No	Items Name	Specification	Quantity
	8" long ,SS	side spoon , 8" long ,SS	
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 made)	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) (Vertical)	Pipette stand (plastic PP made) (Vertical)	4
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

Sl. No	Items Name	Specification	Quantity
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,500gm	Sodium chloride,500gm Highly Pure, Analytical Grade	1
121.	Petroleum Ethar, 500ml (60°C-80°C)	Petroleum Ethar, 500ml (60°C-80°C) 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

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. White Board
2. White board writing pen
3. Projector
4. Computer

Annexure 3: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1.	Red Cow Dairy Pvt. Ltd	Bijan Bishnu	Asst. Manager	Nandan Housing Complex, Station Road, Hooghly	90730 22965	Bishnubijanfp7007@gmail.com	
2.	Krishna Chandra Dutta (Spice) Pvt Ltd	Dr.Dipan Chatterjee	Food technology & quality control manager		98305 65872	dipanchatterjee@cookme.com	
3.	M/s Foodies Agro	Mr. Monoj Mishra	Proprietor	Beharampur, Murshidabad	97751 86565	foodiesagro@rediffmail.com	

Annexure 4: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2023-24	600	100% self employed	240	100% self employed	----	----

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
1.0	2020-21	600	541	541	100% (self employed)			147	100% (self employed)	----	----	----	----
	2021-22	500	493	493	100% (self employed)			136	100% (self employed)				

List Schemes in which the previous version of Qualification was implemented:

1. State Level Short Term Program under “Utkarsh Bangla” Scheme.

Content availability for previous versions of qualifications:

Participant Handbook Facilitator Guide Digital Content Qualification Handbook Any Other:

Languages in which Content is available: English

Annexure 5: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools: NA

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	<input type="checkbox"/> Theory/ Lectures - Imparting theoretical and conceptual knowledge	NA	NA
2	<input type="checkbox"/> Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	NA	NA
3	<input type="checkbox"/> Showing Practical Demonstrations to the learners	NA	NA
4	<input type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	NA	NA
5	<input type="checkbox"/> Tutorials/ Assignments/ Drill/ Practice	NA	NA
6	<input type="checkbox"/> Proctored Monitoring/ Assessment/ Evaluation/ Examinations	NA	NA
7	<input type="checkbox"/> On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	NA	NA

Annexure 6: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
AGR/0234/OC1,V2.0	Identify the species of earthworm capable for producing vermi compost from agriculture waste.	24	60		
	(1.1) Identify and select types of earthworm species. (1.2) Illustrate the role of earthworm in soil. (1.3) Identify earthworm through morphological and physiological examination. (1.4) Select the agriculture waste for producing vermi compost (1.5) Prepare vermi compost by using commercial Earthworms.				
	Total Marks	24	60		
AGR/0234/OC2,V2.0	Construct the compost pit and bed with Pit method.	24	60		
	(2.1) Identify and select the location for preparation of compost pit. (2.2) Select the raw materials required for compost pit (2.3) Prepare the pit as per requirement and size. (2.4) Follow the proper procedure for preparation of compost. (2.5) Practice on Pit method of vermicomposting. (2.6) Practice on Heap method of vermicomposting. (2.7) Practice on Poly-vermi method. (2.8) Practice on Hanging methods. (2.9) Enumerating possible risks and hazards in the work environment (2.10) Practising safety exercise.				
	Total Marks	24	60		
AGR/0234/OC3,V2.0	Prepare vermin and other compost.	24	60		
	(3.1) Identify the raw materials require for compost (3.2) .Plan and select the size of the tank (3.3) Collect the bio mass (3.4) Prepare the bed for compost (3.5) Put the raw materials require in the tank. (3.6) Observe regularly and have a frequent check (3.7) Practice of breeding of earthworms in the tray and rack.				

	Total Marks	24	60		
AGR/0234/OC4,V2.0	Collect the vermi wash, analyse the composition and apply to the field	24	60		
	(4.1) Set up the vermi wash procedure (4.2) Set up the collection device in proper place (4.3) Collect the vermi wash (4.4) Identify the composition of vermi wash (4.5) Recognize the role of vermi wash in crop production				
	Total Marks	24	60		
	Pack vermi compost and other compost for transportation	24	60		
	(5.1) Identify the materials required for packaging of vermi compost. (5.2) Practice on packaging of vermi compost (5.3) Practice for different weight of vermi compost for farmers and domestic users				
	Total Marks	24	60		
AGR/0234/OC6,V2.0	Apply the compost fertilizer in agricultural field according to the composition of the soil.	28	60		
	(6.1) Identify the soil to be fertilized. (6.2) Identify and select the area of the field and crops (6.3) Practice on application of bedwash in field by foliar spraying (6.4) Practice on application of vermiwash in field by foliar spraying				
	Total Marks	28	60		
	Work in real job situation with special emphasis on basic safety and hazards in this domain.	0	0	440	
	(8.1) 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.				
	Total Marks	0	0	440	
DGT/VSQ/N0102, V1.0	Employability Skills- 60 hrs.	50	0		
	As per model curriculum of NCVET				
	Total Marks				
Grand Total		200	360	440	

Annexure 7: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

<1. Assessment System Overview:

- Batches assigned to WBSCTVE&SD for conducting the assessment online through Portal with two probable dates for Assessment
- WBSCTVE&SD deploys the ToA certified Assessor for executing the assessment
- WBSCTVE&SD monitors the assessment process & records

2. Testing Environment:

- Check the Assessment location, date and time
- If the batch size is more than 30, then Assessment will spill over to consecutive days.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

3. Assessment Quality Assurance levels/Framework:

- Question bank is created by the Subject Matter Experts (SME) are verified by the other SME
- Questions are mapped to the specified assessment criteria
- Assessor must be ToA certified.

4. Types of evidence or evidence-gathering protocol:

- reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding

5. Method of verification or validation:

- Surprise visit to the assessment location

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored

On the Job:

1. Each module will be assessed separately.
2. The pass criteria is as per norms set by WBSCTVE&SD in respect of Qualification Files
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills, understanding needs & requirements, and perform Soft Skills effectively:
 - Videos / portfolio of Trainees during OJT
4. Assessment of each Module will ensure that the candidate is able to:
 - Effective engagement with the stakeholders
 - Understand the working of various tools and equipment
 - Deliver the job assigned to him/her in conformity with job responsibility ascribed to Qualification File.

Annexure 8: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body

ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf

NSQC Approved