



# Gardener

QP Code: AGR/Q0801

Version: 2.0

NSQF Level: 4

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## Qualification Pack

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## Qualification Pack

### AGR/Q0801: Gardener

#### Brief Job Description

A Gardener is responsible for planting and maintaining lawns and gardens in private and public properties such as homes, parks and hotels. The individual uses a variety of tools and equipment for this purpose and carries out their basic repair and maintenance also.

#### Personal Attributes

The individual should have love and inclination for plants and nature and stamina to work for long duration in outdoor settings. The person must be able to work independently and take relevant decisions. Problem-solving skills along with basic reading, writing and communication skills are other important attributes required in this role.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [AGR/N0801: Raise saplings in the nursery for transplanting in the garden](#)
2. [AGR/N0802: Prepare to set up the garden](#)
3. [AGR/N0803: Set up the garden as per the plan](#)
4. [AGR/N0842: Carry out maintenance of the garden](#)
5. [AGR/N9918: Communicate effectively at the workplace](#)
6. [AGR/N9903: Maintain health and safety at the workplace](#)
7. [AGR/N0843: Design, set up and maintain a rooftop garden](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Landscaping, Gardening and Urban Farming
<b>Country</b>	India
<b>NSQF Level</b>	4

### Qualification Pack

<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/6113.0301
<b>Minimum Educational Qualification &amp; Experience</b>	5th Class with 6 Months of experience working in a garden or nursery OR Certificate-NSQF (L3, AGR/Q0804 Assistant Gardener) with 1-2 Years of experience in garden operations OR Certificate-NSQF ( L3, AGR/Q0807 Nursery Worker) with 1-2 Years of experience in nursery operations
<b>Minimum Level of Education for Training in School</b>	9th Class
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	18/03/2021
<b>Next Review Date</b>	27/05/2024
<b>NSQC Approval Date</b>	27/05/2021
<b>Version</b>	2.0
<b>Reference code on NQR</b>	2021/AGR/ASCI/04239
<b>NQR Version</b>	1

## Qualification Pack

# AGR/N0801: Raise saplings in the nursery for transplanting in the garden

## Description

This OS unit is about propagating plants in a nursery using a variety of propagation methods.

## Scope

The scope covers the following :

- Prepare for nursery operations
- Prepare the nursery bed
- Propagate saplings through seeds
- Propagate plants through cutting, root division, layering and budding

## Elements and Performance Criteria

### *Prepare for nursery operations*

To be competent, the user/individual on the job must be able to:

- PC1.** select the relevant varieties of plants to grow in the garden as per the season and client preferences
- PC2.** arrange the plant seeds, fertilizer, insecticides/ pesticides and poly bags/ containers to raise saplings
- PC3.** ensure the availability of water and electricity for nursery operations
- PC4.** organise the necessary tools, implements and Personal Protective Equipment (PPE) for nursery operations
- PC5.** construct the shade net house, store-room, compost area, etc.
- PC6.** erect framed structures such as poly-tunnels, hardening chamber, mist chamber for plant propagation
- PC7.** prepare farmyard manure or compost as per the Standard Operating Procedure (SOP)
- PC8.** conduct a soil test to identify the soil treatment requirements
- PC9.** apply the necessary treatment on the soil as per the requirement

### *Prepare the nursery bed*

To be competent, the user/individual on the job must be able to:

- PC10.** dry plough the nursery field as required
- PC11.** apply fertilizers, farmyard manure or compost uniformly on the field in the recommended quantity
- PC12.** water the field with the recommended quantity of water
- PC13.** puddle the field for the recommended duration of time
- PC14.** level the field using an appropriate implement

### *Propagate saplings through seeds*

To be competent, the user/individual on the job must be able to:

- PC15.** sort out the poor-quality/ damaged seeds
- PC16.** fill in the poly bags and containers with the recommended quantity of treated soil



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- PC17.** carry out pre-sowing treatment of the seeds
- PC18.** create raised, level or sunken seedbed according to the local conditions
- PC19.** sow seeds in the seedbed, poly bags and containers at the recommended depth
- PC20.** apply the recommended quantity of water and manure/ fertilizer on the sown seeds as per the SOP
- PC21.** maintain saplings in the seedbed/ poly bags/ containers for the recommended period
- PC22.** acclimatise the saplings before transplanting

### *Propagate plants through cutting, root division, layering and budding*

To be competent, the user/individual on the job must be able to:

- PC23.** select a healthy plant to take cutting from
- PC24.** extract stems of the recommended specifications from the plant
- PC25.** use the stems to propagate plants maintaining the required level of moisture and sunlight exposure
- PC26.** select a healthy and grown plant for root division
- PC27.** create root divisions from the plant's root
- PC28.** use the root divisions to propagate plants maintaining the recommended environment
- PC29.** select an appropriate method of layering according to the type of plant
- PC30.** cover the stem / tip / trunk of the plant with soil according to the selected method
- PC31.** apply the recommended quantity of water and fertilizer to support the growth of roots
- PC32.** prepare a rootstock for budding
- PC33.** cut a bud-stick from a healthy and disease-free plant with the required characteristics
- PC34.** prepare and use bud-scion to propagate plants
- PC35.** apply the approved pesticides/ insecticides to protect the plants from pests and diseases
- PC36.** maintain the record of nursery operations

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** applicable record-keeping requirements in the job role
- KU2.** resources required for setting up a nursery
- KU3.** construction of the nursery infrastructure such as shade net house, store-room, compost area, etc.
- KU4.** how to erect and use poly-tunnels, hardening chamber, mist chamber, etc.
- KU5.** propagation of plants using seeds
- KU6.** different methods of plant propagation such as root division, seeding, cutting, layering, etc.
- KU7.** how to conduct a soil test to identify soil treatment requirements
- KU8.** types of seedbed such as raised/ level/ sunken
- KU9.** the process of preparing a nursery bed and seedbed
- KU10.** variety of material required for propagating plants in a nursery
- KU11.** relevant tools and equipment and their correct use

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**KU12.** safe use of fertilizers, pesticides and insecticides

**KU13.** water requirements of different types of saplings

### Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** maintain work-related records

**GS2.** read and follow the health and safety instructions

**GS3.** listen attentively to understand the information/ instructions being shared by the speaker

**GS4.** communicate clearly and politely with co-workers and clients

**GS5.** plan and prioritise tasks to ensure timely completion

**GS6.** identify possible disruptions to work and take appropriate preventive measures

**GS7.** take quick decisions to deal with workplace emergencies/ accidents

**GS8.** evaluate all possible solutions to a problem to select the best one

**GS9.** co-ordinate with the co-workers to achieve the work objectives

**Qualification Pack**
**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for nursery operations</i>	<b>6</b>	<b>8</b>	-	<b>8</b>
<b>PC1.</b> select the relevant varieties of plants to grow in the garden as per the season and client preferences	-	-	-	-
<b>PC2.</b> arrange the plant seeds, fertilizer, insecticides/ pesticides and poly bags/ containers to raise saplings	-	-	-	-
<b>PC3.</b> ensure the availability of water and electricity for nursery operations	-	-	-	-
<b>PC4.</b> organise the necessary tools, implements and Personal Protective Equipment (PPE) for nursery operations	-	-	-	-
<b>PC5.</b> construct the shade net house, store-room, compost area, etc.	-	-	-	-
<b>PC6.</b> erect framed structures such as poly-tunnels, hardening chamber, mist chamber for plant propagation	-	-	-	-
<b>PC7.</b> prepare farmyard manure or compost as per the Standard Operating Procedure (SOP)	-	-	-	-
<b>PC8.</b> conduct a soil test to identify the soil treatment requirements	-	-	-	-
<b>PC9.</b> apply the necessary treatment on the soil as per the requirement	-	-	-	-
<i>Prepare the nursery bed</i>	<b>8</b>	<b>12</b>	-	<b>8</b>
<b>PC10.</b> dry plough the nursery field as required	-	-	-	-
<b>PC11.</b> apply fertilizers, farmyard manure or compost uniformly on the field in the recommended quantity	-	-	-	-
<b>PC12.</b> water the field with the recommended quantity of water	-	-	-	-



**Qualification Pack**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> puddle the field for the recommended duration of time	-	-	-	-
<b>PC14.</b> level the field using an appropriate implement	-	-	-	-
<i>Propagate saplings through seeds</i>	<b>8</b>	<b>10</b>	-	<b>8</b>
<b>PC15.</b> sort out the poor-quality/ damaged seeds	-	-	-	-
<b>PC16.</b> fill in the poly bags and containers with the recommended quantity of treated soil	-	-	-	-
<b>PC17.</b> carry out pre-sowing treatment of the seeds	-	-	-	-
<b>PC18.</b> create raised, level or sunken seedbed according to the local conditions	-	-	-	-
<b>PC19.</b> sow seeds in the seedbed, poly bags and containers at the recommended depth	-	-	-	-
<b>PC20.</b> apply the recommended quantity of water and manure/ fertilizer on the sown seeds as per the SOP	-	-	-	-
<b>PC21.</b> maintain saplings in the seedbed/ poly bags/ containers for the recommended period	-	-	-	-
<b>PC22.</b> acclimatise the saplings before transplanting	-	-	-	-
<i>Propagate plants through cutting, root division, layering and budding</i>	<b>8</b>	<b>10</b>	-	<b>6</b>
<b>PC23.</b> select a healthy plant to take cutting from	-	-	-	-
<b>PC24.</b> extract stems of the recommended specifications from the plant	-	-	-	-
<b>PC25.</b> use the stems to propagate plants maintaining the required level of moisture and sunlight exposure	-	-	-	-
<b>PC26.</b> select a healthy and grown plant for root division	-	-	-	-
<b>PC27.</b> create root divisions from the plant's root	-	-	-	-

**Qualification Pack**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC28.</b> use the root divisions to propagate plants maintaining the recommended environment	-	-	-	-
<b>PC29.</b> select an appropriate method of layering according to the type of plant	-	-	-	-
<b>PC30.</b> cover the stem / tip / trunk of the plant with soil according to the selected method	-	-	-	-
<b>PC31.</b> apply the recommended quantity of water and fertilizer to support the growth of roots	-	-	-	-
<b>PC32.</b> prepare a rootstock for budding	-	-	-	-
<b>PC33.</b> cut a bud-stick from a healthy and disease-free plant with the required characteristics	-	-	-	-
<b>PC34.</b> prepare and use bud-scion to propagate plants	-	-	-	-
<b>PC35.</b> apply the approved pesticides/ insecticides to protect the plants from pests and diseases	-	-	-	-
<b>PC36.</b> maintain the record of nursery operations	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	<b>-</b>	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N0801
<b>NOS Name</b>	Raise saplings in the nursery for transplanting in the garden
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Landscaping, Gardening & Urban Farming
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2026
<b>NSQF Clearance Date</b>	27/05/2021

## Qualification Pack

### AGR/N0802: Prepare to set up the garden

#### Description

This OS unit is about conducting a site survey to plan a garden and arranging the relevant material to plant the garden.

#### Scope

The scope covers the following :

- Plan to set up the garden
- Arrange the necessary resources

#### Elements and Performance Criteria

##### *Plan to set up the garden*

To be competent, the user/individual on the job must be able to:

- PC1.** conduct a survey of the site proposed for setting up the garden
- PC2.** assess the soil and climate characteristics at the site to establish suitability for planting a garden
- PC3.** co-ordinate with an authorised lab to identify the soil's micro and macro-nutrient requirements
- PC4.** select the relevant soil treatment method to improve the quality of soil
- PC5.** check if the site has adequate exposure to sunlight
- PC6.** identify the varieties of plants, trees, grass, shrubs, hedges and edges suitable for growing in the climate
- PC7.** measure the land area for preparing the layout of the garden
- PC8.** calculate the spacing between plants/ trees/ shrubs and rows as per their variety and available land area
- PC9.** select a pattern for planting the plants, trees, grass, shrubs, hedges and edges for aesthetics
- PC10.** check the availability of water, electricity and other inputs at the site
- PC11.** select the type of garden to be established as per the client's requirements
- PC12.** plan relevant garden features as per the client requirements such as walkways, steps, statues, fountain, pond, etc.
- PC13.** estimate the requirement of various material for establishing the garden
- PC14.** prepare the layout of the garden based on the assessment of client requirements

##### *Arrange the necessary resources*

To be competent, the user/individual on the job must be able to:

- PC15.** estimate the cost of purchasing the required material
- PC16.** arrange the funds required for purchasing the material
- PC17.** identify multiple vendors of the material required for establishing the garden
- PC18.** select a vendor based on the quality and price of the material available with them

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- PC19.** purchase the material as per the requirement
- PC20.** store the material appropriately as per its storage requirements
- PC21.** maintain the record of purchase

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** various parameters to assess while conducting a site survey before establishing a garden
- KU2.** suitable soil and climate conditions for setting up a garden
- KU3.** varieties of trees, plants, grass, shrubs, hedges and edges used in gardens
- KU4.** different types of garden such as vegetable garden, herb garden, flower garden, woodland garden, water garden, rock garden, etc.
- KU5.** various garden features such as flower beds, carpet beds, borders, paths, steps, statues, foundations, streams, pools, arches, hanging pots etc.
- KU6.** variety of material required for setting up a garden such as plants, shrubs, fertilizers, pesticides, tools, equipment, Personal Protective Equipment (PPE), etc.
- KU7.** importance of conducting a soil test before planting a garden and applying the necessary soil treatment to improve the quality of soil
- KU8.** the process of preparing a layout for setting up a garden
- KU9.** basic practices related to maintaining the record of purchase and payments

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** perform basic calculations
- GS2.** write work-related notes and maintain relevant records
- GS3.** read the relevant literature to get latest updates about the field of work
- GS4.** listen attentively to understand the information/ instructions being shared by the speaker
- GS5.** communicate clearly and politely with co-workers and clients
- GS6.** plan and prioritise tasks to ensure timely completion
- GS7.** evaluate all possible solutions to a problem to select the best one
- GS8.** co-ordinate with co-workers to achieve work objectives
- GS9.** identify possible disruptions to work and take appropriate preventive measures
- GS10.** take quick decisions to deal with workplace emergencies/ accidents

**Qualification Pack**
**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan to set up the garden</i>	<b>10</b>	<b>12</b>	-	<b>8</b>
<b>PC1.</b> conduct a survey of the site proposed for setting up the garden	-	-	-	-
<b>PC2.</b> assess the soil and climate characteristics at the site to establish suitability for planting a garden	-	-	-	-
<b>PC3.</b> co-ordinate with an authorised lab to identify the soil's micro and macro-nutrient requirements	-	-	-	-
<b>PC4.</b> select the relevant soil treatment method to improve the quality of soil	-	-	-	-
<b>PC5.</b> check if the site has adequate exposure to sunlight	-	-	-	-
<b>PC6.</b> identify the varieties of plants, trees, grass, shrubs, hedges and edges suitable for growing in the climate	-	-	-	-
<b>PC7.</b> measure the land area for preparing the layout of the garden	-	-	-	-
<b>PC8.</b> calculate the spacing between plants/ trees/ shrubs and rows as per their variety and available land area	-	-	-	-
<b>PC9.</b> select a pattern for planting the plants, trees, grass, shrubs, hedges and edges for aesthetics	-	-	-	-
<b>PC10.</b> check the availability of water, electricity and other inputs at the site	-	-	-	-
<b>PC11.</b> select the type of garden to be established as per the client's requirements	-	-	-	-
<b>PC12.</b> plan relevant garden features as per the client requirements such as walkways, steps, statues, fountain, pond, etc.	-	-	-	-



**Qualification Pack**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> estimate the requirement of various material for establishing the garden	-	-	-	-
<b>PC14.</b> prepare the layout of the garden based on the assessment of client requirements	-	-	-	-
<i>Arrange the necessary resources</i>	<b>20</b>	<b>28</b>	-	<b>22</b>
<b>PC15.</b> estimate the cost of purchasing the required material	-	-	-	-
<b>PC16.</b> arrange the funds required for purchasing the material	-	-	-	-
<b>PC17.</b> identify multiple vendors of the material required for establishing the garden	-	-	-	-
<b>PC18.</b> select a vendor based on the quality and price of the material available with them	-	-	-	-
<b>PC19.</b> purchase the material as per the requirement	-	-	-	-
<b>PC20.</b> store the material appropriately as per its storage requirements	-	-	-	-
<b>PC21.</b> maintain the record of purchase	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N0802
<b>NOS Name</b>	Prepare to set up the garden
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Landscaping, Gardening & Urban Farming
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2026
<b>NSQF Clearance Date</b>	27/05/2021

## Qualification Pack

### AGR/N0803: Set up the garden as per the plan

#### Description

This OS unit about setting up a garden as per the client requirements.

#### Scope

The scope covers the following :

- Prepare the field for planting
- Plant the garden
- Set up garden features and irrigation or fertigation system
- Prepare the flower bed
- Optimise resource utilisation

#### Elements and Performance Criteria

##### *Prepare the field for planting*

To be competent, the user/individual on the job must be able to:

- PC1.** remove all roots, debris and waste material from the land
- PC2.** examine the soil for an appropriate level of moisture for tilling
- PC3.** till the land to the required depth
- PC4.** apply the necessary treatment on the soil such as relevant chemicals, peat, lime, manure, compost, etc.
- PC5.** identify and remove weeds from the land
- PC6.** ensure the soil is well-drained and there is no accumulation of water in the land
- PC7.** prepare rows and holes for planting seeds/ plants as per the planned layout
- PC8.** ensure the holes are deep and wide enough to support healthy plant growth
- PC9.** arrange for drainage of water from the garden

##### *Plant the garden*

To be competent, the user/individual on the job must be able to:

- PC10.** plant trees/ plants/ shrubs/ grass/ hedges and edges in the selected pattern maintaining the required spacing
- PC11.** apply soil cover on the planted roots of the trees/ plants/ shrubs/ grass/ hedges and edges
- PC12.** water the trees/ plants/ shrubs/ grass/ hedges and edges with the recommended quantity of water
- PC13.** apply an appropriate type of fertilizer/ manure/ mulch on the roots of the hedges and edges
- PC14.** install supports for the relevant types of plants to help them grow as intended
- PC15.** erect fences around the garden to protect it from animals
- PC16.** identify the types of annual plants to grow
- PC17.** obtain the seeds of the selected plants
- PC18.** sort out damaged and unhealthy seeds

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- PC19.** plant the seeds as per the SOP
- PC20.** water the planted seeds with the recommended quantity
- PC21.** install support to allow tender plants to grow straight
- PC22.** identify the appropriate vegetable, fruits and indoor plants to grow
- PC23.** prepare potting mixture using the recommended ingredients
- PC24.** plant the vegetables and fruit plants
- PC25.** plant bonsai trees in pots of the appropriate size
- PC26.** carry out potting and repotting for the optimum growth of potted plants

### *Set up garden features and irrigation or fertigation system*

To be competent, the user/individual on the job must be able to:

- PC27.** set up an appropriate irrigation system such as drip irrigation, sprinkler irrigation, subsurface irrigation
- PC28.** install a fertigation system as per the requirement
- PC29.** install various garden features such as walkways, statues, fountain as per the layout

### *Prepare the flower bed*

To be competent, the user/individual on the job must be able to:

- PC30.** identify a spot with sufficient exposure to sunlight
- PC31.** remove any existing grass/ plants/ debris from the spot
- PC32.** drain out any water accumulated in the spot
- PC33.** ensure the soil has the correct level of moisture
- PC34.** till the soil to the recommended depth
- PC35.** prepare the flower bed as per the Standard Operating Procedure (SOP)
- PC36.** plant flowering plants such as bulbs, orchids, succulents, cacti in combination with bedding plants
- PC37.** maintain the recommended spacing between plants

### *Optimise resource utilisation*

To be competent, the user/individual on the job must be able to:

- PC38.** optimise the usage of various material in different tasks / processes
- PC39.** optimise the usage of water/ electricity/ relevant materials in various tasks / processes
- PC40.** connect electrical tools and equipment safely and turn off when not in use

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** correct method and depth of tilling a field for gardening
- KU2.** various material used for treating garden soil such as relevant chemicals, peat, lime, manure, compost, etc.
- KU3.** planting of various types of trees/ plants/ shrubs/ hedges and edges in a garden
- KU4.** importance of having effective drainage in the garden
- KU5.** safe handling of planting material
- KU6.** the process of preparing a nursery bed

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- KU7.** installation of different types of irrigation systems such as drip irrigation, sprinkler irrigation, subsurface irrigation, etc.
- KU8.** different garden features and their installation process
- KU9.** the installation process of a fertigation system and its advantages
- KU10.** process of preparing a flower bed
- KU11.** method of growing annual plants, fruits, vegetables and indoor plants
- KU12.** importance of following environmental and ecological best practices to minimise the impact on the environment
- KU13.** benefits of resource optimisation
- KU14.** ways of efficiently managing various materials used in greenhouse operations
- KU15.** common practices of conserving electricity

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** read relevant literature to get updated information about the field of work
- GS2.** write work-related notes
- GS3.** listen attentively to understand the client requirements
- GS4.** communicate professionally and politely
- GS5.** plan and schedule tasks for effective time management
- GS6.** co-ordinate with the co-workers and supervisor to achieve work objectives
- GS7.** evaluate all possible solutions to a problem before choosing the best one
- GS8.** take quick decisions to deal with any emergencies/ accidents

**Qualification Pack**
**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare the field for planting</i>	<b>6</b>	<b>8</b>	-	<b>6</b>
<b>PC1.</b> remove all roots, debris and waste material from the land	-	-	-	-
<b>PC2.</b> examine the soil for an appropriate level of moisture for tilling	-	-	-	-
<b>PC3.</b> till the land to the required depth	-	-	-	-
<b>PC4.</b> apply the necessary treatment on the soil such as relevant chemicals, peat, lime, manure, compost, etc.	-	-	-	-
<b>PC5.</b> identify and remove weeds from the land	-	-	-	-
<b>PC6.</b> ensure the soil is well-drained and there is no accumulation of water in the land	-	-	-	-
<b>PC7.</b> prepare rows and holes for planting seeds/ plants as per the planned layout	-	-	-	-
<b>PC8.</b> ensure the holes are deep and wide enough to support healthy plant growth	-	-	-	-
<b>PC9.</b> arrange for drainage of water from the garden	-	-	-	-
<i>Plant the garden</i>	<b>10</b>	<b>14</b>	-	<b>10</b>
<b>PC10.</b> plant trees/ plants/ shrubs/ grass/ hedges and edges in the selected pattern maintaining the required spacing	-	-	-	-
<b>PC11.</b> apply soil cover on the planted roots of the trees/ plants/ shrubs/ grass/ hedges and edges	-	-	-	-
<b>PC12.</b> water the trees/ plants/ shrubs/ grass/ hedges and edges with the recommended quantity of water	-	-	-	-
<b>PC13.</b> apply an appropriate type of fertilizer/ manure/ mulch on the roots of the hedges and edges	-	-	-	-



**Qualification Pack**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> install supports for the relevant types of plants to help them grow as intended	-	-	-	-
<b>PC15.</b> erect fences around the garden to protect it from animals	-	-	-	-
<b>PC16.</b> identify the types of annual plants to grow	-	-	-	-
<b>PC17.</b> obtain the seeds of the selected plants	-	-	-	-
<b>PC18.</b> sort out damaged and unhealthy seeds	-	-	-	-
<b>PC19.</b> plant the seeds as per the SOP	-	-	-	-
<b>PC20.</b> water the planted seeds with the recommended quantity	-	-	-	-
<b>PC21.</b> install support to allow tender plants to grow straight	-	-	-	-
<b>PC22.</b> identify the appropriate vegetable, fruits and indoor plants to grow	-	-	-	-
<b>PC23.</b> prepare potting mixture using the recommended ingredients	-	-	-	-
<b>PC24.</b> plant the vegetables and fruit plants	-	-	-	-
<b>PC25.</b> plant bonsai trees in pots of the appropriate size	-	-	-	-
<b>PC26.</b> carry out potting and repotting for the optimum growth of potted plants	-	-	-	-
<i>Set up garden features and irrigation or fertigation system</i>	<b>5</b>	<b>7</b>	-	<b>5</b>
<b>PC27.</b> set up an appropriate irrigation system such as drip irrigation, sprinkler irrigation, subsurface irrigation	-	-	-	-
<b>PC28.</b> install a fertigation system as per the requirement	-	-	-	-
<b>PC29.</b> install various garden features such as walkways, statues, fountain as per the layout	-	-	-	-
<i>Prepare the flower bed</i>	<b>5</b>	<b>8</b>	-	<b>5</b>

**Qualification Pack**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC30.</b> identify a spot with sufficient exposure to sunlight	-	-	-	-
<b>PC31.</b> remove any existing grass/ plants/ debris from the spot	-	-	-	-
<b>PC32.</b> drain out any water accumulated in the spot	-	-	-	-
<b>PC33.</b> ensure the soil has the correct level of moisture	-	-	-	-
<b>PC34.</b> till the soil to the recommended depth	-	-	-	-
<b>PC35.</b> prepare the flower bed as per the Standard Operating Procedure (SOP)	-	-	-	-
<b>PC36.</b> plant flowering plants such as bulbs, orchids, succulents, cacti in combination with bedding plants	-	-	-	-
<b>PC37.</b> maintain the recommended spacing between plants	-	-	-	-
<i>Optimise resource utilisation</i>	<b>4</b>	<b>3</b>	-	<b>4</b>
<b>PC38.</b> optimise the usage of various material in different tasks / processes	-	-	-	-
<b>PC39.</b> optimise the usage of water/ electricity/ relevant materials in various tasks / processes	-	-	-	-
<b>PC40.</b> connect electrical tools and equipment safely and turn off when not in use	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N0803
<b>NOS Name</b>	Set up the garden as per the plan
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Landscaping, Gardening & Urban Farming
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2026
<b>NSQF Clearance Date</b>	27/05/2021

## Qualification Pack

### AGR/N0842: Carry out maintenance of the garden

#### Description

This OS unit is about carrying out various activities to maintain a garden.

#### Scope

The scope covers the following :

- Perform plant nutrition management
- Perform pest and disease management
- Carry out training, pruning and mowing
- Control weeds in the garden
- Maintain the irrigation/ fertigation system
- Carry out general maintenance of the garden
- Perform waste management

#### Elements and Performance Criteria

##### *Perform plant nutrition management*

To be competent, the user/individual on the job must be able to:

- PC1.** water garden plants/ trees/ shrubs/ grass/ hedges and edges with the recommended quantity of water
- PC2.** apply the recommended quantity of fertilizers/ manure at appropriate intervals
- PC3.** maintain the appropriate moisture and sunlight exposure for different varieties of plants/ trees/ shrubs/ grass/ hedges and edges

##### *Perform pest and disease management*

To be competent, the user/individual on the job must be able to:

- PC4.** examine the garden plants/ trees/ shrubs/ grass/ hedges and edges for signs of pests and diseases
- PC5.** apply the approved insecticides/ pesticides as per the manufacturer's instructions
- PC6.** maintain the record of insecticides/ pesticides used in the garden

##### *Carry out training, pruning and mowing*

To be competent, the user/individual on the job must be able to:

- PC7.** check the garden plants/ trees/ shrubs/ grass/ hedges and edges to identify their training and pruning needs
- PC8.** carry out pruning using the appropriate tools such as shears, pruners, or chain saw etc.
- PC9.** train the relevant plants, trees/ shrubs/ hedges and edges using the recommended training methods
- PC10.** dehead the dead flowers from the flower bed
- PC11.** mow the lawn as per the maintenance schedule

##### *Control weeds in the garden*

To be competent, the user/individual on the job must be able to:

## Qualification Pack

- PC12.** apply mulch in the garden to prevent weed growth
- PC13.** identify different types of weed growth in the garden
- PC14.** remove weeds using the recommended methods and tools

### *Maintain the irrigation/ fertigation system*

To be competent, the user/individual on the job must be able to:

- PC15.** check the irrigation/ fertigation system installed in the garden for any repair and maintenance needs
- PC16.** carry out regular repair and maintenance of the irrigation/ fertigation system
- PC17.** co-ordinate with an expert for complex repair and maintenance needs

### *Carry out general maintenance*

To be competent, the user/individual on the job must be able to:

- PC18.** maintain cleanliness of the garden and its features
- PC19.** rake the dead leaves and debris from the lawn
- PC20.** drain out the accumulated water from the garden
- PC21.** carry out minor repair and maintenance of the gardening tools and equipment

### *Perform waste management*

To be competent, the user/individual on the job must be able to:

- PC22.** segregate waste into different categories
- PC23.** dispose the non-recyclable waste appropriately
- PC24.** deposit the recyclable and reusable material at the identified location

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** safe use of fertilizers, pesticides and insecticides
- KU2.** correct use and common repair/ maintenance of various garden tools and equipment
- KU3.** macro and micro nutrient management of various types of horticultural plants/ trees/ shrubs/ hedges and edges
- KU4.** methods of training and pruning a variety of plants/ trees/ shrubs/ hedges and edges
- KU5.** repair and maintenance of different types of irrigation/ fertigation systems
- KU6.** integrated pest and disease management for horticultural plants/ trees/ shrubs/ hedges and edges
- KU7.** various weed control methods
- KU8.** maintenance of flower beds, annual plants, vegetables, fruit trees and indoor plants
- KU9.** lawn maintenance requirements
- KU10.** different methods of recycling and disposing waste
- KU11.** common sources of pollution and ways to minimise it

## Generic Skills (GS)

User/individual on the job needs to know how to:

## Qualification Pack

- GS1.** write work-related notes
- GS2.** read the relevant guides and manuals
- GS3.** listen attentively to understand the client requirements
- GS4.** communicate professionally and politely
- GS5.** plan and schedule tasks for effective time management
- GS6.** co-ordinate with the co-workers to achieve work objectives
- GS7.** identify possible disruptions to work and take preventive measures
- GS8.** evaluate all possible solutions to a problem before choosing the best one
- GS9.** take quick action to deal with any emergencies/ accidents



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform plant nutrition management</i>	<b>4</b>	<b>6</b>	-	<b>10</b>
<b>PC1.</b> water garden plants/ trees/ shrubs/ grass/ hedges and edges with the recommended quantity of water	-	-	-	-
<b>PC2.</b> apply the recommended quantity of fertilizers/ manure at appropriate intervals	-	-	-	-
<b>PC3.</b> maintain the appropriate moisture and sunlight exposure for different varieties of plants/ trees/ shrubs/ grass/ hedges and edges	-	-	-	-
<i>Perform pest and disease management</i>	<b>4</b>	<b>2</b>	-	<b>4</b>
<b>PC4.</b> examine the garden plants/ trees/ shrubs/ grass/ hedges and edges for signs of pests and diseases	-	-	-	-
<b>PC5.</b> apply the approved insecticides/ pesticides as per the manufacturer's instructions	-	-	-	-
<b>PC6.</b> maintain the record of insecticides/ pesticides used in the garden	-	-	-	-
<i>Carry out training, pruning and mowing</i>	<b>4</b>	<b>6</b>	-	<b>4</b>
<b>PC7.</b> check the garden plants/ trees/ shrubs/ grass/ hedges and edges to identify their training and pruning needs	-	-	-	-
<b>PC8.</b> carry out pruning using the appropriate tools such as shears, pruners, or chain saw etc.	-	-	-	-
<b>PC9.</b> train the relevant plants, trees/ shrubs/ hedges and edges using the recommended training methods	-	-	-	-
<b>PC10.</b> dehead the dead flowers from the flower bed	-	-	-	-
<b>PC11.</b> mow the lawn as per the maintenance schedule	-	-	-	-
<i>Control weeds in the garden</i>	<b>4</b>	<b>6</b>	-	<b>4</b>

**Qualification Pack**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> apply mulch in the garden to prevent weed growth	-	-	-	-
<b>PC13.</b> identify different types of weed growth in the garden	-	-	-	-
<b>PC14.</b> remove weeds using the recommended methods and tools	-	-	-	-
<i>Maintain the irrigation/ fertigation system</i>	<b>6</b>	<b>8</b>	-	<b>4</b>
<b>PC15.</b> check the irrigation/ fertigation system installed in the garden for any repair and maintenance needs	-	-	-	-
<b>PC16.</b> carry out regular repair and maintenance of the irrigation/ fertigation system	-	-	-	-
<b>PC17.</b> co-ordinate with an expert for complex repair and maintenance needs	-	-	-	-
<i>Carry out general maintenance</i>	<b>4</b>	<b>6</b>	-	<b>2</b>
<b>PC18.</b> maintain cleanliness of the garden and its features	-	-	-	-
<b>PC19.</b> rake the dead leaves and debris from the lawn	-	-	-	-
<b>PC20.</b> drain out the accumulated water from the garden	-	-	-	-
<b>PC21.</b> carry out minor repair and maintenance of the gardening tools and equipment	-	-	-	-
<i>Perform waste management</i>	<b>4</b>	<b>6</b>	-	<b>2</b>
<b>PC22.</b> segregate waste into different categories	-	-	-	-
<b>PC23.</b> dispose the non-recyclable waste appropriately	-	-	-	-
<b>PC24.</b> deposit the recyclable and reusable material at the identified location	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N0842
<b>NOS Name</b>	Carry out maintenance of the garden
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Landscaping, Gardening and Urban Farming
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2026
<b>NSQC Clearance Date</b>	27/05/2021

## Qualification Pack

### AGR/N9918: Communicate effectively at the workplace

#### Description

This OS is about communicating effectively with stakeholders at the workplace.

#### Scope

The scope covers the following :

- Effective communication at the workplace
- Mentor apprentice
- Practice inclusion at the workplace

#### Elements and Performance Criteria

##### *Effective communication at the workplace*

To be competent, the user/individual on the job must be able to:

- PC1.** interpret verbal and written instructions
- PC2.** note down instructions received from the seniors
- PC3.** seek clarifications on instructions, if any
- PC4.** seek requisite information from a source or person
- PC5.** provide information in the desired format and frequency
- PC6.** carry out work-related documentation
- PC7.** report accidents and incidents as per procedure

##### *Mentor apprentice*

To be competent, the user/individual on the job must be able to:

- PC8.** explain scope of work to the apprentice
- PC9.** demonstrate the work to the apprentice
- PC10.** assign work to the apprentice
- PC11.** monitor progress made by the apprentice
- PC12.** report performance of the apprentice to the senior
- PC13.** explain safety procedure and use of PPE to the apprentice

##### *Practice inclusion at the workplace*

To be competent, the user/individual on the job must be able to:

- PC14.** maintain a conducive environment for all the genders and Persons with Disabilities (PwD) at the workplace
- PC15.** encourage appropriate behaviour and conduct with people across genders and PwD
- PC16.** practice appropriate verbal and non-verbal communication while interacting with PwD
- PC17.** ensure equal participation of people across genders and PwD in discussions

#### Knowledge and Understanding (KU)

## Qualification Pack

The individual on the job needs to know and understand:

- KU1.** applicable legislation, standards, policies and procedures for work
- KU2.** applicable health and safety requirements
- KU3.** own job role & responsibilities pertaining to work
- KU4.** procedure for seeking guidance and work-related information and clarification
- KU5.** work-related documentation and procedures
- KU6.** available means of communication at the workplace
- KU7.** importance of information sharing
- KU8.** methods of information storage
- KU9.** mode of training of apprentice
- KU10.** gender concepts, issues and legislations
- KU11.** actions and consequences of gendered behavior
- KU12.** need for gender sensitization
- KU13.** different types of disabilities
- KU14.** PwD related Laws/Schemes/Acts/Provisions
- KU15.** challenges faced by PwD and the ways to help them overcome the same
- KU16.** importance of displaying empathy towards PwD
- KU17.** inclusive practices at the workplace

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write plan of work
- GS2.** write incident report
- GS3.** read instructions received from the seniors
- GS4.** read workplace procedures and equipment manuals
- GS5.** read and follow health and safety instructions
- GS6.** communicate clearly and effectively with the stakeholders
- GS7.** explain plan of work to co-workers, juniors and apprentice
- GS8.** make decisions pertaining to the concerned area of work
- GS9.** take preventative action against the problems that may arise during task implementation
- GS10.** take decision in the best interest of the organization
- GS11.** plan and organize tasks with the help of a co-worker or an apprentice
- GS12.** maintain effective working relationships with stakeholders
- GS13.** think through the problem, evaluate the possible solution(s) and adopt an optimum /best possible solution(s)
- GS14.** report to the senior
- GS15.** analyze, evaluate and apply the information gathered from observation, experience, reasoning or communication, as a guide to thought and action

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Effective communication at the workplace</i>	<b>22</b>	<b>20</b>	-	<b>13</b>
<b>PC1.</b> interpret verbal and written instructions	-	-	-	-
<b>PC2.</b> note down instructions received from the seniors	-	-	-	-
<b>PC3.</b> seek clarifications on instructions, if any	-	-	-	-
<b>PC4.</b> seek requisite information from a source or person	-	-	-	-
<b>PC5.</b> provide information in the desired format and frequency	-	-	-	-
<b>PC6.</b> carry out work-related documentation	-	-	-	-
<b>PC7.</b> report accidents and incidents as per procedure	-	-	-	-
<i>Mentor apprentice</i>	<b>24</b>	<b>16</b>	-	<b>20</b>
<b>PC8.</b> explain scope of work to the apprentice	-	-	-	-
<b>PC9.</b> demonstrate the work to the apprentice	-	-	-	-
<b>PC10.</b> assign work to the apprentice	-	-	-	-
<b>PC11.</b> monitor progress made by the apprentice	-	-	-	-
<b>PC12.</b> report performance of the apprentice to the senior	-	-	-	-
<b>PC13.</b> explain safety procedure and use of PPE to the apprentice	-	-	-	-
<i>Practice inclusion at the workplace</i>	<b>14</b>	<b>10</b>	-	<b>11</b>
<b>PC14.</b> maintain a conducive environment for all the genders and Persons with Disabilities (PwD) at the workplace	-	-	-	-
<b>PC15.</b> encourage appropriate behaviour and conduct with people across genders and PwD	-	-	-	-



### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC16.</b> practice appropriate verbal and non-verbal communication while interacting with PwD	-	-	-	-
<b>PC17.</b> ensure equal participation of people across genders and PwD in discussions	-	-	-	-
<b>NOS Total</b>	<b>60</b>	<b>46</b>	-	<b>44</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N9918
<b>NOS Name</b>	Communicate effectively at the workplace
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	24/02/2022
<b>Next Review Date</b>	24/02/2025
<b>NSQC Clearance Date</b>	24/02/2022

## Qualification Pack

### AGR/N9903: Maintain health and safety at the workplace

#### Description

This OS is about maintaining health and safety of self and other co-workers at the workplace

#### Scope

The scope covers the following :

- Maintain personal hygiene
- Maintain clean and safe workplace
- Administer appropriate emergency procedures

#### Elements and Performance Criteria

##### *Maintain personal hygiene*

To be competent, the user/individual on the job must be able to:

- PC1.** wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals
- PC2.** wash the worn clothes with soap and sun dry before use next time
- PC3.** ensure the face is covered with mask or three layers of cloth-piece
- PC4.** follow the workplace sanitization norms including distancing from sick people

##### *Maintain clean and safe workplace*

To be competent, the user/individual on the job must be able to:

- PC5.** carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor
- PC6.** wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy
- PC7.** follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards
- PC8.** assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices
- PC9.** sanitize equipment, tools and machinery before and after use
- PC10.** use equipment and materials safely and correctly and return the same to designated storage after use
- PC11.** dispose waste safely and correctly in the designated area
- PC12.** recognize risks to bystanders and take required action to reduce the risks
- PC13.** work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed
- PC14.** report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger
- PC15.** follow government / workplace advisories incase of outbreak of any disease/disaster

##### *Administer appropriate emergency procedures*

To be competent, the user/individual on the job must be able to:

## Qualification Pack

- PC16.** follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements
- PC17.** use emergency equipment in accordance with manufacturer's specifications and workplace requirements
- PC18.** provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques
- PC19.** recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate
- PC20.** report details of first aid administered in accordance with workplace procedures

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** relevant legislation, standards, policies, and procedures at work
- KU2.** relevant health and safety requirements applicable to the work environment
- KU3.** own job role and responsibilities and sources of information pertaining to work
- KU4.** who to approach for support in order to obtain work related information, clarifications and support
- KU5.** importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business
- KU6.** personal hygiene and fitness requirement
- KU7.** importance of sanitization of the workplace
- KU8.** types of Personal Protective Equipment (PPE) required at the workplace and their importance
- KU9.** the correct and safe way to use materials and equipment required for the work
- KU10.** the importance of good housekeeping at the workplace
- KU11.** safe waste disposal methods
- KU12.** methods for minimizing environmental damage during work
- KU13.** the risks to health and safety including contagious diseases and the measures to be taken to control those risks in the area of work
- KU14.** workplace procedures and requirements for the prevention and treatment of workplace injuries/illnesses.
- KU15.** basic emergency first aid procedure
- KU16.** local emergency services
- KU17.** why accidents, incidents and problems should be reported and the appropriate actions to be taken

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** record the data as per the requirement
- GS2.** report problems to the appropriate personnel in a timely manner

## Qualification Pack

- GS3.** read instruction manual for hand tool and equipments
- GS4.** communicate clearly and effectively with co-workers, and other stakeholders
- GS5.** comprehend information shared by senior people and experts
- GS6.** make decisions pertaining to personal hygiene and safety
- GS7.** schedule daily activities and draw up priorities
- GS8.** manage relationships with co-workers, manager and other stakeholders
- GS9.** assess situation and identify appropriate control measures

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain personal hygiene</i>	<b>10</b>	<b>5</b>	-	<b>10</b>
<b>PC1.</b> wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals	-	-	-	-
<b>PC2.</b> wash the worn clothes with soap and sun dry before use next time	-	-	-	-
<b>PC3.</b> ensure the face is covered with mask or three layers of cloth-piece	-	-	-	-
<b>PC4.</b> follow the workplace sanitization norms including distancing from sick people	-	-	-	-
<i>Maintain clean and safe workplace</i>	<b>15</b>	<b>15</b>	-	<b>15</b>
<b>PC5.</b> carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor	-	-	-	-
<b>PC6.</b> wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy	-	-	-	-
<b>PC7.</b> follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards	-	-	-	-
<b>PC8.</b> assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices	-	-	-	-
<b>PC9.</b> sanitize equipment, tools and machinery before and after use	-	-	-	-
<b>PC10.</b> use equipment and materials safely and correctly and return the same to designated storage after use	-	-	-	-
<b>PC11.</b> dispose waste safely and correctly in the designated area	-	-	-	-
<b>PC12.</b> recognize risks to bystanders and take required action to reduce the risks	-	-	-	-

**Qualification Pack**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed	-	-	-	-
<b>PC14.</b> report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger	-	-	-	-
<b>PC15.</b> follow government / workplace advisories incase of outbreak of any disease/disaster	-	-	-	-
<i>Administer appropriate emergency procedures</i>	<b>15</b>	<b>5</b>	-	<b>10</b>
<b>PC16.</b> follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements	-	-	-	-
<b>PC17.</b> use emergency equipment in accordance with manufacturer's specifications and workplace requirements	-	-	-	-
<b>PC18.</b> provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques	-	-	-	-
<b>PC19.</b> recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate	-	-	-	-
<b>PC20.</b> report details of first aid administered in accordance with workplace procedures	-	-	-	-
<b>NOS Total</b>	<b>40</b>	<b>25</b>	-	<b>35</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N9903
<b>NOS Name</b>	Maintain health and safety at the workplace
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	24/02/2022
<b>Next Review Date</b>	24/02/2025
<b>NSQC Clearance Date</b>	24/02/2022



## Qualification Pack

### AGR/N0843: Design, set up and maintain a rooftop garden

#### Description

This OS unit is about designing, setting up and maintaining a rooftop garden.

#### Scope

The scope covers the following :

- Plan the rooftop garden
- Set up the rooftop garden
- Maintain the rooftop garden

#### Elements and Performance Criteria

##### *Plan the rooftop garden*

To be competent, the user/individual on the job must be able to:

- PC1.** check if a rooftop garden is permitted as per the local legislation in the proposed area
- PC2.** assess the roof's loading capacity with the help of a structural engineer/ architect
- PC3.** ensure that there are no major installations or structures on the roof that may cause obstruction
- PC4.** assess the climatic conditions at the site to establish suitability for planting a rooftop garden
- PC5.** obtain the necessary approvals for the rooftop garden design
- PC6.** check that the building has an effective drainage system
- PC7.** assess the sunlight and wind exposure at the roof
- PC8.** check for adequate availability of water at the roof
- PC9.** measure the available space for the purpose of designing the rooftop garden
- PC10.** plan the placement of plants, furniture and garden features
- PC11.** select heat and drought tolerant plants, trees and shrubs of appropriate weight and size for the rooftop garden
- PC12.** select the appropriate material such as plastic, fiberglass or foam planting containers according to the roof's loading capacity
- PC13.** prepare a detailed plan through discussion with the client
- PC14.** estimate the cost of setting up the rooftop garden

##### *Set up the rooftop garden*

To be competent, the user/individual on the job must be able to:

- PC15.** arrange the necessary plants/ shrubs, material, tools and equipment for setting up the rooftop garden
- PC16.** prepare lightweight potting soil for planting plants, trees and shrubs
- PC17.** plant the trees, plants and shrubs as per the SOP
- PC18.** water the plants and shrubs with the recommended quantity of water
- PC19.** install windbreaks, appropriate support and shading for the plants, trees and shrubs

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- PC20.** apply fertilizers in the recommended quantity
- PC21.** install an irrigation system for watering the plants
- PC22.** carry out waterproofing of the roof garden
- PC23.** arrange for safe drainage of water from the garden
- PC24.** install garden features and furniture of appropriate weight and size as per the garden plan

### *Maintain the rooftop garden*

To be competent, the user/individual on the job must be able to:

- PC25.** apply mulch on the plants to stabilise evaporation and control weed
- PC26.** examine plants, trees and shrubs for healthy growth and pest and disease infestation
- PC27.** apply fertilizers, manure and pesticides/ insecticides in the recommended quantity at appropriate intervals
- PC28.** train plants and shrubs as per the requirement
- PC29.** prune plants, trees and shrubs to ensure their healthy growth and aesthetics
- PC30.** remove weeds as per the SOP
- PC31.** carry out repair and maintenance of the garden pots, features, irrigation and drainage system
- PC32.** maintain record of the maintenance activities

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** applicable documentation and record-keeping requirements
- KU2.** various parameters to assess while planning a rooftop a garden
- KU3.** importance of evaluating loading capacity of the roof before setting up the rooftop garden
- KU4.** how to assess the roof's loading capacity with the help of a structural engineer/ architect.
- KU5.** different ways of waterproofing a rooftop garden
- KU6.** various landscaping practices for the beautification of rooftop gardens including garden furniture and features
- KU7.** various material of appropriate size and weight for rooftop gardens
- KU8.** varieties of trees, plants, and shrubs suitable for a rooftop garden and their maintenance
- KU9.** the process of preparing lightweight potting soil for use in rooftop garden plant pots
- KU10.** the process of installing windbreaks and other appropriate support to provide shading for the plants, trees and shrubs

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** prepare work-plan and related notes
- GS2.** read relevant literature to learn about advancements in the field of work
- GS3.** co-ordinate with co-workers and clients to achieve work objectives

## Qualification Pack

- GS4.** identify possible disruptions to work and take preventive measures
- GS5.** perform basic calculations
- GS6.** plan and schedule tasks for effective time-management
- GS7.** communicate politely and professionally
- GS8.** evaluate all possible solutions to a problem to select the best one

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan the rooftop garden</i>	<b>10</b>	<b>12</b>	-	<b>8</b>
<b>PC1.</b> check if a rooftop garden is permitted as per the local legislation in the proposed area	-	-	-	-
<b>PC2.</b> assess the roof's loading capacity with the help of a structural engineer/ architect	-	-	-	-
<b>PC3.</b> ensure that there are no major installations or structures on the roof that may cause obstruction	-	-	-	-
<b>PC4.</b> assess the climatic conditions at the site to establish suitability for planting a rooftop garden	-	-	-	-
<b>PC5.</b> obtain the necessary approvals for the rooftop garden design	-	-	-	-
<b>PC6.</b> check that the building has an effective drainage system	-	-	-	-
<b>PC7.</b> assess the sunlight and wind exposure at the roof	-	-	-	-
<b>PC8.</b> check for adequate availability of water at the roof	-	-	-	-
<b>PC9.</b> measure the available space for the purpose of designing the rooftop garden	-	-	-	-
<b>PC10.</b> plan the placement of plants, furniture and garden features	-	-	-	-
<b>PC11.</b> select heat and drought tolerant plants, trees and shrubs of appropriate weight and size for the rooftop garden	-	-	-	-
<b>PC12.</b> select the appropriate material such as plastic, fiberglass or foam planting containers according to the roof's loading capacity	-	-	-	-
<b>PC13.</b> prepare a detailed plan through discussion with the client	-	-	-	-

**Qualification Pack**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> estimate the cost of setting up the rooftop garden	-	-	-	-
<i>Set up the rooftop garden</i>	<b>12</b>	<b>12</b>	-	<b>12</b>
<b>PC15.</b> arrange the necessary plants/ shrubs, material, tools and equipment for setting up the rooftop garden	-	-	-	-
<b>PC16.</b> prepare lightweight potting soil for planting plants, trees and shrubs	-	-	-	-
<b>PC17.</b> plant the trees, plants and shrubs as per the SOP	-	-	-	-
<b>PC18.</b> water the plants and shrubs with the recommended quantity of water	-	-	-	-
<b>PC19.</b> install windbreaks, appropriate support and shading for the plants, trees and shrubs	-	-	-	-
<b>PC20.</b> apply fertilizers in the recommended quantity	-	-	-	-
<b>PC21.</b> install an irrigation system for watering the plants	-	-	-	-
<b>PC22.</b> carry out waterproofing of the roof garden	-	-	-	-
<b>PC23.</b> arrange for safe drainage of water from the garden	-	-	-	-
<b>PC24.</b> install garden features and furniture of appropriate weight and size as per the garden plan	-	-	-	-
<i>Maintain the rooftop garden</i>	<b>8</b>	<b>16</b>	-	<b>10</b>
<b>PC25.</b> apply mulch on the plants to stabilise evaporation and control weed	-	-	-	-
<b>PC26.</b> examine plants, trees and shrubs for healthy growth and pest and disease infestation	-	-	-	-
<b>PC27.</b> apply fertilizers, manure and pesticides/ insecticides in the recommended quantity at appropriate intervals	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC28.</b> train plants and shrubs as per the requirement	-	-	-	-
<b>PC29.</b> prune plants, trees and shrubs to ensure their healthy growth and aesthetics	-	-	-	-
<b>PC30.</b> remove weeds as per the SOP	-	-	-	-
<b>PC31.</b> carry out repair and maintenance of the garden pots, features, irrigation and drainage system	-	-	-	-
<b>PC32.</b> maintain record of the maintenance activities	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>40</b>	-	<b>30</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N0843
<b>NOS Name</b>	Design, set up and maintain a rooftop garden
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Agriculture Crop Production
<b>Occupation</b>	Landscaping, Gardening and Urban Farming
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	27/05/2026
<b>NSQC Clearance Date</b>	27/05/2021

## Assessment Guidelines and Assessment Weightage

### Assessment Guidelines

- 1.Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
- 2.The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
- 3.Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
- 4.Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
- 5.In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
- 6.In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

## Qualification Pack

### Minimum Aggregate Passing % at QP Level : 70

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

### Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N0801.Raise saplings in the nursery for transplanting in the garden	30	40	-	30	100	15
AGR/N0802.Prepare to set up the garden	30	40	-	30	100	15
AGR/N0803.Set up the garden as per the plan	30	40	-	30	100	20
AGR/N0842.Carry out maintenance of the garden	30	40	-	30	100	15
AGR/N9918.Communicate effectively at the workplace	60	46	-	44	150	5
AGR/N9903.Maintain health and safety at the workplace	40	25	-	35	100	15
AGR/N0843.Design, set up and maintain a rooftop garden	30	40	-	30	100	15
<b>Total</b>	<b>250</b>	<b>271</b>	<b>-</b>	<b>229</b>	<b>750</b>	<b>100</b>



## Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training

## Qualification Pack

### Glossary

<b>Sector</b>	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

## Qualification Pack

<b>Knowledge and Understanding (KU)</b>	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
<b>Organisational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.