

Qualification Pack



Vriksh Sanrakshak

QP Code: AGR/Q6107

Version: 1.0

NSQF Level: 4

Agriculture Skill Council of India || 6th Floor, GNG Tower, Plot No. 10, Sector -44, Gurgaon
Haryana-122004 || email:mohit@advisoryfeedback.com

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AGR/Q6107: Vriksh Sanrakshak

Brief Job Description

A Vriksh Sanrakshak is responsible for planting, maintaining, and removing trees, woody plants and shrubs. The individual is required to prune trees, woody plants and shrubs and remove diseased or potentially dangerous ones. This involves climbing trees and manoeuvring in and around them. The person also maintains the health of trees, woody plants and shrubs, which involves pest and disease management and the application of fertilizers, soil health management and irrigation. The individual also uses and maintains various hand and power tools for carrying out relevant tasks.

Personal Attributes

The individual must be physically fit to work for long durations at heights. The person must be able to work in coordination with others. The individual must have reading, writing, verbal communication skills, and problem-solving skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [AGR/N6135: Plan and plant trees, woody plants and shrubs](#)
2. [AGR/N6136: Perform pest, disease and nutrient management of trees, woody plants and shrubs](#)
3. [AGR/N6137: Carry out pruning, felling and other maintenance activities](#)
4. [AGR/N6138: Perform general maintenance of trees](#)
5. [AGR/N9903: Maintain health and safety at the workplace](#)
6. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

Qualification Pack (QP) Parameters

| | |
|-------------------|---|
| Sector | Agriculture |
| Sub-Sector | Forestry, Environment and Renewable Energy Management |
| Occupation | Agro-Forestry Management |
| Country | India |

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|---|--|
| NSQF Level | 4 |
| Credits | 13 |
| Aligned to NCO/ISCO/ISIC Code | NCO-2015/NIL |
| Minimum Educational Qualification & Experience | 12th grade Pass OR Completed 2nd year of the 3-year diploma after 10 (and pursuing regular diploma) OR 10th grade pass (plus 2-year NTC) OR 10th grade pass with 1 year NTC plus NAC OR 8th grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS OR 10th grade pass and pursuing continuous schooling OR 10th grade pass with 2 Years of experience OR Previous relevant Qualification of NSQF Level (3.0 with minimum education as 8th Grade pass) with 3 Years of experience OR Previous relevant Qualification of NSQF Level (3.5 with 1.5 year of experience) |
| Minimum Level of Education for Training in School | |
| Pre-Requisite License or Training | NA |
| Minimum Job Entry Age | 18 Years |
| Last Reviewed On | NA |
| Next Review Date | 05/01/2026 |
| NSQC Approval Date | 05/01/2023 |
| Version | 1.0 |
| Reference code on NQR | QG-04-AG-00092-2023-V1-ASCI |
| NQR Version | 1.0 |

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AGR/N6135: Plan and plant trees, woody plants and shrubs

Description

This OS unit is about planning and planting trees, woody plants and shrubs. It includes site and species selection, preparing the layout, and carrying out planting and other activities.

Scope

The scope covers the following :

- Select the site and tree/woody plant/shrub species
- Prepare the layout and arrange the resources
- Prepare the site for planting
- Plant trees, woody plants and shrubs
- Set up stakes, support and windbreaks

Elements and Performance Criteria

Select the site and tree/woody plant/shrub species

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

- PC1.** determine the soil and space requirements for planting new trees, plants and shrubs
- PC2.** select the appropriate tree, plant and shrub species that can grow in the selected climate zone and the soil conditions at the site
- PC3.** select the appropriate site to plant the selected tree, plant and shrub species

Prepare the layout and arrange the resources

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

- PC4.** prepare a layout planning the placement of varieties of trees, plants and shrubs to ensure aesthetics and no obstructions and disruptions to utilities
- PC5.** identify appropriate spots at the recommended planting density for planting trees, plants and shrubs to ensure their optimum growth
- PC6.** arrange the selected species of trees, plants and shrubs in the required number for planting, ensuring they are free from pests and diseases
- PC7.** store the procured trees, plants and shrubs at the recommended temperature and humidity, ensuring hygienic conditions in the storage area

Prepare the site for planting

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

- PC8.** prepare the identified spots for planting by removing any debris and digging holes of the recommended dimensions
- PC9.** apply the recommended organic and inorganic fertilizers in the holes before planting
- PC10.** arrange for efficient drainage of water to prevent waterlogging at the planting spots

Plant trees, woody plants and shrubs

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

- PC11.** prepare seed balls for the relevant seed varieties to aid their handling and germination

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- PC12.** propagate tree seedlings/ saplings following the appropriate propagation methods
- PC13.** plant the selected trees, woody plants and shrubs appropriately, maintaining the planned planting density
- PC14.** transplant the tree seedlings/ saplings taking the appropriate precautions to ensure their survival
- PC15.** follow the recommended safety measures while planting advanced-sized trees
- PC16.** assist in establishing tree plantations
- PC17.** follow the appropriate measures to facilitate smooth planting and establishment of trees
- PC18.** apply the recommended organic or inorganic fertilizers to the trees, plants and shrubs immediately after planting and water them with the recommended quantity
- PC19.** arrange to protect the planted trees, plants and shrubs from extreme heat/ cold and astray animals

Set up stakes, support and windbreaks

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

- PC20.** install stakes to train the growth of trees, plants and shrubs, as required
- PC21.** set up appropriate support/aids to train plants into decorative shapes
- PC22.** plant appropriate types of trees as windbreaks to protect young and tender plants from strong winds
- PC23.** create pergolas around plants for improved support
- PC24.** install decorative tree guards
- PC25.** set up lacy ironwork trellis or wooden lattice for climbers
- PC26.** install appropriate support to provide support to heavy and large trees

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the scope and nature of arboriculture or vriksh sanrakshan
- KU2.** the basics of horticulture
- KU3.** different types of plant and tree species, e.g. deciduous trees (maple, birch betula, ash, oak, etc.)
- KU4.** the biology of trees, i.e. photosynthesis, respiration, transpiration, vernalization, etc.
- KU5.** the identification of different types of plants and trees
- KU6.** different types of soils suitable for a variety of trees
- KU7.** the structures of different types of soils
- KU8.** the soil-tree relationship
- KU9.** the process of designing tree plantations
- KU10.** how to produce drawings to scale
- KU11.** the importance and process of assessing the soil and space requirements for planting new trees, woody plants and shrubs
- KU12.** the process of identifying the appropriate spots at the recommended planting density for planting trees, woody plants and shrubs to ensure their optimum growth

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- KU13.** different species of trees, woody plants and shrubs suitable for growing in different climate zones and soil conditions
- KU14.** the criteria to identify the appropriate tree species to be grown in different agro-climatic zones
- KU15.** the criteria for establishing a tree plantation at a specific site, considering the site restrictions, costs, functions, etc.
- KU16.** the process of designing tree plantations, considering the factors such as the soil profile, climate suitability for selected tree species, the influence of trees on buildings and utilities, etc.
- KU17.** the importance of growing pest, disease and harsh weather tolerant plant and tree species
- KU18.** the process of preparing a layout planning the placement of varieties of trees, woody plants and shrubs
- KU19.** the importance of checking trees, plants and shrubs while procuring them to ensure they are free from pests and diseases
- KU20.** the recommended temperature and humidity for storing the procured trees, woody plants and shrubs
- KU21.** different seed propagation techniques
- KU22.** how to propagate the appropriate tree varieties in a nursery and how to maintain the nursery stock
- KU23.** the process of removing debris and digging holes of the recommended dimensions for planting
- KU24.** the relevant plant establishment programs
- KU25.** the environments hostile to tree growth
- KU26.** the appropriate care to be provided after planting to help plants and trees establish
- KU27.** the process of planting advanced-sized trees and bare-rooted plants
- KU28.** the process of transplanting trees and the use of tree guards
- KU29.** pocket planting, slope serration and wattling
- KU30.** the process of acclimatizing different types of plants and trees
- KU31.** the benefits of planting fire, acid, saline and frost-resistant trees
- KU32.** the importance of planting hardy trees in city areas
- KU33.** the influence of trees on buildings and the appropriate considerations
- KU34.** the recommended organic and inorganic fertilizers to be applied to the soil before and after planting of trees, woody plants and shrubs
- KU35.** the importance of ensuring efficient drainage of water to prevent waterlogging at the planting spots
- KU36.** the process of planting trees, woody plants and shrubs, and the recommended planting density to be maintained
- KU37.** the importance and process of installing appropriate support such as stakes to train the growth of trees, woody plants and shrubs as desired
- KU38.** the immediate care to be provided to trees, woody plants and shrubs after planting
- KU39.** how to protect the planted trees, plants and shrubs from strong winds, extreme heat/ cold and astray animals

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- KU40.** different parts of a tree, e.g. tissue, leaf, wood, root structures, and how they interact with each other
- KU41.** main characteristics of the most common tree genera and the terminology needed for identifications
- KU42.** the key consideration for choosing the right tree for the site to maximize its benefits
- KU43.** the plant nomenclature and their classifications
- KU44.** how plant characteristics are used in tree identification
- KU45.** how to create relevant drawings to scale
- KU46.** essential tree nutrition required for their optimum growth
- KU47.** general horticulture practices, such as seedbed/nursery bed preparation, sowing/planting varieties of seeds/plants, fertilizer and pesticide application, weeding, training, pruning, etc.
- KU48.** the basics of garden management, parks management, landscaping, land rehabilitation, tree surgery, forestry, tree nursery production, and urban horticulture
- KU49.** different approaches to land rehabilitation
- KU50.** different types of soil appropriate for growing trees
- KU51.** how to determine the need to install support for trees and plants
- KU52.** the importance of installing windbreaks, different types of windbreak designs
- KU53.** how to support a heavy crop of flowers or fruit
- KU54.** how to support non-clinging climbers
- KU55.** how to train plants into decorative shapes and around doorways and windows
- KU56.** the appropriate measures to be taken to protect vulnerable plants from wind damage
- KU57.** how to select the windbreak tree species to be grown
- KU58.** the appropriate sun protection measures
- KU59.** the appropriate fencing for tree plantations

Generic Skills (GS)

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

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

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Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <i>Select the site and tree/woody plant/shrub species</i> | 4 | 6 | - | 4 |
| PC1. determine the soil and space requirements for planting new trees, plants and shrubs | - | - | - | - |
| PC2. select the appropriate tree, plant and shrub species that can grow in the selected climate zone and the soil conditions at the site | - | - | - | - |
| PC3. select the appropriate site to plant the selected tree, plant and shrub species | - | - | - | - |
| <i>Prepare the layout and arrange the resources</i> | 6 | 8 | - | 6 |
| PC4. prepare a layout planning the placement of varieties of trees, plants and shrubs to ensure aesthetics and no obstructions and disruptions to utilities | - | - | - | - |
| PC5. identify appropriate spots at the recommended planting density for planting trees, plants and shrubs to ensure their optimum growth | - | - | - | - |
| PC6. arrange the selected species of trees, plants and shrubs in the required number for planting, ensuring they are free from pests and diseases | - | - | - | - |
| PC7. store the procured trees, plants and shrubs at the recommended temperature and humidity, ensuring hygienic conditions in the storage area | - | - | - | - |
| <i>Prepare the site for planting</i> | 4 | 6 | - | 4 |
| PC8. prepare the identified spots for planting by removing any debris and digging holes of the recommended dimensions | - | - | - | - |
| PC9. apply the recommended organic and inorganic fertilizers in the holes before planting | - | - | - | - |
| PC10. arrange for efficient drainage of water to prevent waterlogging at the planting spots | - | - | - | - |
| <i>Plant trees, woody plants and shrubs</i> | 6 | 8 | - | 6 |

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| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| PC11. prepare seed balls for the relevant seed varieties to aid their handling and germination | - | - | - | - |
| PC12. propagate tree seedlings/ saplings following the appropriate propagation methods | - | - | - | - |
| PC13. plant the selected trees, woody plants and shrubs appropriately, maintaining the planned planting density | - | - | - | - |
| PC14. transplant the tree seedlings/ saplings taking the appropriate precautions to ensure their survival | - | - | - | - |
| PC15. follow the recommended safety measures while planting advanced-sized trees | - | - | - | - |
| PC16. assist in establishing tree plantations | - | - | - | - |
| PC17. follow the appropriate measures to facilitate smooth planting and establishment of trees | - | - | - | - |
| PC18. apply the recommended organic or inorganic fertilizers to the trees, plants and shrubs immediately after planting and water them with the recommended quantity | - | - | - | - |
| PC19. arrange to protect the planted trees, plants and shrubs from extreme heat/ cold and stray animals | - | - | - | - |
| <i>Set up stakes, support and windbreaks</i> | 10 | 12 | - | 10 |
| PC20. install stakes to train the growth of trees, plants and shrubs, as required | - | - | - | - |
| PC21. set up appropriate support/aids to train plants into decorative shapes | - | - | - | - |
| PC22. plant appropriate types of trees as windbreaks to protect young and tender plants from strong winds | - | - | - | - |
| PC23. create pergolas around plants for improved support | - | - | - | - |
| PC24. install decorative tree guards | - | - | - | - |

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| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| PC25. set up lacy ironwork trellis or wooden lattice for climbers | - | - | - | - |
| PC26. install appropriate support to provide support to heavy and large trees | - | - | - | - |
| NOS Total | 30 | 40 | - | 30 |

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National Occupational Standards (NOS) Parameters

| | |
|----------------------------|---|
| NOS Code | AGR/N6135 |
| NOS Name | Plan and plant trees, woody plants and shrubs |
| Sector | Agriculture |
| Sub-Sector | Forestry, Environment and Renewable Energy Management |
| Occupation | Agro-Forestry Management |
| NSQF Level | 4 |
| Credits | 2 |
| Version | 1.0 |
| Last Reviewed Date | 29/09/2023 |
| Next Review Date | 29/09/2026 |
| NSQC Clearance Date | 29/09/2023 |

Qualification Pack

AGR/N6136: Perform pest, disease and nutrient management of trees, woody plants and shrubs

Description

This OS unit is about maintaining trees, woody plants, shrubs and their surroundings.

Scope

The scope covers the following :

- Perform pest and disease management
- Perform soil, nutrient and irrigation management

Elements and Performance Criteria

Perform pest and disease management

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

- PC1.** follow the recommended preventive and control measures and plant pests, and diseases and disorders
- PC2.** conduct a pre-work inspection to identify biotic hazards, such as bees and poisonous plants and take appropriate preventive measures
- PC3.** check the trees, plants and shrubs regularly to identify pest, insect and disease infestation
- PC4.** diagnose different types of tree diseases and disorders by studying the symptoms
- PC5.** identify the signs of heat stress and frost damage in trees and take appropriate remedial measures
- PC6.** identify and adopt the latest and innovative plant protection technologies
- PC7.** identify bark wounds and carry out appropriate treatment
- PC8.** identify and remove termite infestation from trees
- PC9.** apply the recommended pesticides and insecticides to trees, plants and shrubs as per the prescription, using the relevant tools, equipment and Personal Protective Equipment (PPE)
- PC10.** follow the recommended practices to prevent adverse effects of pesticides in the surroundings
- PC11.** maintain the manual and/or electronic record concerning the use of pesticides in the physical registers and the relevant computer application

Perform soil, nutrient and irrigation management

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

- PC12.** check the pH levels in the soil using a pH meter and apply the recommended treatment in the prescribed quantity to adjust the pH level, if required
- PC13.** identify the signs of nutrient deficiency in plants and trees
- PC14.** coordinate with an approved lab for the testing of soil
- PC15.** apply the suggested organic and inorganic fertilizers to the soil in the recommended quantity at appropriate intervals to maintain the required macro and micronutrient levels and ensure the healthy growth of trees, plants and shrubs

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- PC16.** irrigate the trees, plants, and shrubs with the recommended quantity of water as per the irrigation schedule recommended for planted species

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the basics of tree and plant anatomy and taxonomy, plant pathology, and soil science
- KU2.** the applicable arboriculture, horticulture, and landscaping practices and methods
- KU3.** the importance and process of examining trees, plants and shrubs regularly to identify pest, insect and disease infestation
- KU4.** different classifications of insects and the relevant control measures
- KU5.** the control measures for the relevant non-insect pests
- KU6.** the importance of conducting regular tree and soil inspections, and observing trees growing in a wide variety of conditions for relevant problems
- KU7.** different types of health problems experienced by trees and appropriate treatments for them
- KU8.** the symptoms of infestation by different types of pests, insects and diseases that affect trees, woody plants and shrubs, such as blight and fungal infection
- KU9.** the process of diagnosing tree problems
- KU10.** the appropriate treatment for heat stress, frost damage and bark wounds
- KU11.** the ecology of soils and plant health
- KU12.** the process of determining the damage caused to trees by pests and insects and whether they can be saved through treatment or need to be felled
- KU13.** the process of applying the recommended pesticides and insecticides to trees, plants and shrubs as per the prescription
- KU14.** the benefits and potential risks of using different types of pesticides
- KU15.** the use of the relevant tools, equipment and Personal Protective Equipment (PPE) for applying pesticides
- KU16.** the recommended practices to be followed to prevent adverse effects of pesticides in the surroundings of trees, plants and shrubs
- KU17.** the appropriate treatment to be used to treat the soil around diseased trees, woody plants and shrubs
- KU18.** how to deal with chemical poisoning
- KU19.** the process of maintaining manual and electronic records using the physical registers and the relevant computer application
- KU20.** the recommended level of moisture to be maintained in the soil for the healthy growth of trees, woody plants and shrubs
- KU21.** how to balance soil composition and maintain correct moisture levels through watering and training
- KU22.** the trees and the water table (aquifers)
- KU23.** the importance of ensuring efficient drainage around trees, plants and shrubs to prevent damages caused by waterlogging
- KU24.** the process of checking the pH levels in the soil using a pH meter and applying the recommended treatment to adjust the pH level

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- KU25.** the importance of monitoring and maintaining the appropriate soil conditions for the healthy growth of trees, plants and shrubs
- KU26.** the process of getting the soil tested by an approved soil testing lab and applying the prescribed treatment to maintain the required macro and micronutrient levels
- KU27.** the appropriate organic and inorganic fertilizers to be applied to a variety of soils for the healthy growth of trees, plants and shrubs
- KU28.** the recommended irrigation schedule for different species of trees, woody plants, and shrubs
- KU29.** the importance of applying the recommended organic and inorganic fertilizers to the soil in the recommended quantity for the healthy growth of trees, plants and shrubs
- KU30.** the main characteristics of common tree genera and the terminology needed for their identification
- KU31.** various biotic and abiotic disorders relevant to arboriculture
- KU32.** how to diagnose different types of disorders in trees and the appropriate treatment to be given for them
- KU33.** basic tree nutrition requirements
- KU34.** the appropriate fertilizers for trees and different fertilizer application methods
- KU35.** the need and process of pruning trees
- KU36.** the requirement of training different types of trees and plants and the use of different types of training materials
- KU37.** the symptoms of different types of pest and disease infestation in plants and trees and the appropriate organic and inorganic control measures
- KU38.** the biological control measures for tree pests and diseases
- KU39.** use of various equipment for tree maintenance
- KU40.** tree injection technique and its applications
- KU41.** the process of analyzing different specimens of mature trees from each different genera to detect any patterns in problems occurring in those trees
- KU42.** the appropriate stage of tree growth for the application of fertilizers
- KU43.** the advantages and disadvantages of various fertilizer application methods
- KU44.** the potential damage lightning may cause to trees and the techniques for installing appropriate protection
- KU45.** the appropriate measures to be taken to foster tree stability and health in the urban landscape
- KU46.** the appropriate planting techniques crucial for tree survival, establishment, and longevity
- KU47.** the appropriate practices to be followed to optimize the health and structure of trees in various situations
- KU48.** the arboriculture pest management techniques
- KU49.** the arboriculture plant health and pest control practices
- KU50.** how trees create, store, and manage their resources
- KU51.** how urban soils can limit root growth and development, and how soils can be improved to foster tree growth
- KU52.** how soil structure and the environment affect water availability for trees
- KU53.** the strategies to be adopted to protect trees during construction
- KU54.** the basic principles of tree risk assessment

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Generic Skills (GS)

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

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

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Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <i>Perform pest and disease management</i> | 15 | 20 | - | 15 |
| PC1. follow the recommended preventive and control measures and plant pests, and diseases and disorders | - | - | - | - |
| PC2. conduct a pre-work inspection to identify biotic hazards, such as bees and poisonous plants and take appropriate preventive measures | - | - | - | - |
| PC3. check the trees, plants and shrubs regularly to identify pest, insect and disease infestation | - | - | - | - |
| PC4. diagnose different types of tree diseases and disorders by studying the symptoms | - | - | - | - |
| PC5. identify the signs of heat stress and frost damage in trees and take appropriate remedial measures | - | - | - | - |
| PC6. identify and adopt the latest and innovative plant protection technologies | - | - | - | - |
| PC7. identify bark wounds and carry out appropriate treatment | - | - | - | - |
| PC8. identify and remove termite infestation from trees | - | - | - | - |
| PC9. apply the recommended pesticides and insecticides to trees, plants and shrubs as per the prescription, using the relevant tools, equipment and Personal Protective Equipment (PPE) | - | - | - | - |
| PC10. follow the recommended practices to prevent adverse effects of pesticides in the surroundings | - | - | - | - |
| PC11. maintain the manual and/or electronic record concerning the use of pesticides in the physical registers and the relevant computer application | - | - | - | - |
| <i>Perform soil, nutrient and irrigation management</i> | 15 | 20 | - | 15 |

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| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| PC12. check the pH levels in the soil using a pH meter and apply the recommended treatment in the prescribed quantity to adjust the pH level, if required | - | - | - | - |
| PC13. identify the signs of nutrient deficiency in plants and trees | - | - | - | - |
| PC14. coordinate with an approved lab for the testing of soil | - | - | - | - |
| PC15. apply the suggested organic and inorganic fertilizers to the soil in the recommended quantity at appropriate intervals to maintain the required macro and micronutrient levels and ensure the healthy growth of trees, plants and shrubs | - | - | - | - |
| PC16. irrigate the trees, plants, and shrubs with the recommended quantity of water as per the irrigation schedule recommended for planted species | - | - | - | - |
| NOS Total | 30 | 40 | - | 30 |

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National Occupational Standards (NOS) Parameters

| | |
|----------------------------|---|
| NOS Code | AGR/N6136 |
| NOS Name | Perform pest, disease and nutrient management of trees, woody plants and shrubs |
| Sector | Agriculture |
| Sub-Sector | Forestry, Environment and Renewable Energy Management |
| Occupation | Agro-Forestry Management |
| NSQF Level | 4 |
| Credits | 2 |
| Version | 1.0 |
| Last Reviewed Date | 29/09/2023 |
| Next Review Date | 29/09/2026 |
| NSQC Clearance Date | 29/09/2023 |

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AGR/N6137: Carry out pruning, felling and other maintenance activities

Description

This OS unit is about carrying out pruning, felling, bracing, cabling, bolting and tree surgery. It also covers safety in arboriculture operations and other regular maintenance activities.

Scope

The scope covers the following :

- Carry out pruning and felling activities
- Carry out bracing, cabling, bolting and tree surgery
- Ensure safety in arboriculture operations
- Carry out regular maintenance activities

Elements and Performance Criteria

Carry out pruning and felling activities

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

- PC1.** identify the requirement of pruning trees, plants and shrubs through examination, and discussion with the client, as applicable
- PC2.** assist engineers, solicitors, and mortgage and insurance companies in carrying out relevant assessments regarding the trees and their root systems threatening the surroundings and buildings
- PC3.** identify the need to remove trees threatening the structural integrity of buildings, public access routes, and utilities such as power lines
- PC4.** calculate the cost of removing the identified trees
- PC5.** carry out appropriate documentation regarding the assessment of possible dangers presented by trees
- PC6.** ensure the worksite is safe for carrying out work with no passers-by and distractions
- PC7.** set up necessary safety signs around the worksite and ensure the presence of a team member on the ground while carrying out arboriculture operations at heights
- PC8.** arrange the appropriate manual/power tools and equipment, such as secateurs, handsaw/chainsaw and hedge trimmers for tree pruning or surgery operations and prepare them for use
- PC9.** prune trees, plants and shrubs and remove the dead/ diseased/ declining ones using the relevant hand and power tools and equipment, such as pruning shears or chainsaw
- PC10.** identify the need to remove treetops or large branches from treetops and carry out tree topping using the appropriate tools and equipment
- PC11.** follow the rigging technique to slowly lower down branches that are too large and may cause property damage or harm to other trees or plants
- PC12.** follow the recommended safety practices while removing fallen, storm-damaged or unwanted trees
- PC13.** remove stumps of the removed/ felled trees

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- PC14.** carry out backfilling after uprooting any trees, plants, and shrubs
- PC15.** ensure to carry out pruning appropriately to encourage healthy growth of trees, plants and shrubs without causing any obstructions in their surroundings
- PC16.** identify and remove any weeds growing in the vicinity of the grown trees, plants and shrubs,
Carry out bracing, cabling, bolting and tree surgery

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

- PC17.** carry out bracing by bolting metal rods to prevent two branches from splitting apart
- PC18.** carry out cabling by attaching a steel cable between two branches to restrict their movement
- PC19.** carry out bolting to support split trunks or branches, and maintain tree limbs apart that may rub against each other
- PC20.** install props of timber logs or metal stakes with padded supports under the fruiting tree branches to provide them temporary support during fruiting
- PC21.** determine the need to carry out tree surgery, e.g. crown thinning, cavity treatment, crown lifting, pollarding, limb removal, dead wooding, etc.
- PC22.** perform tree surgery, taking the appropriate precautions

Ensure safety in arboriculture operations

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

- PC23.** arrange the relevant Personal Protective Equipment (PPE), such as tree climbing gear, hard hat, protective gloves, safety goggles, face shield, earplugs/earmuffs, etc.
- PC24.** check all the PPE to ensure it is in usable condition and coordinate with the supervisor to replace the faulty ones
- PC25.** check the work environment to identify potential hazards and take appropriate preventive measures within own limits of authority or coordinate with the supervisor
- PC26.** use the relevant PPE while applying any harmful chemicals, such as pesticides
- PC27.** use earmuffs to ensure the protection of eardrums from exposure to loud noises generated by power tools
- PC28.** use safety goggles or a face shield to protect the eyes from debris and wood chips expelled during pruning
- PC29.** use safety gloves for better grip and to avoid rope burns and injuries from pieces of wood or thorns
- PC30.** use steel toe boots to get a firm grip on the ground and tree branches
- PC31.** ensure not to carry out arboriculture operations under the influence of medication or intoxicants
- PC32.** arrange the relevant accessories such as ropes, harnesses, ladders and PPE for climbing trees and check them to ensure they are safe for use
- PC33.** follow the recommended safe climbing techniques to avoid falling while climbing trees
- PC34.** climb up trees using ropes, harness, safety belt and ladder, ensuring the protection of others in the surroundings, such as co-workers and passers-by
- PC35.** use the manual and power tools and equipment, e.g. chainsaw, safely as per the manufacturer's instructions

Carry out regular maintenance activities

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

- PC36.** carry out groundwork using the chainsaw and chipper

Qualification Pack

- PC37.** carry out minor repair and maintenance of the relevant tools and equipment as per the manufacturers' instructions
- PC38.** coordinate with the supervisor or relevant expert to resolve any complex issues experienced with tools and equipment
- PC39.** assist in the management of the turf surrounding trees, plants and shrubs

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the process of determining the requirements of pruning trees, plants and shrubs
- KU2.** the process of assessing threats posed by trees and their root systems to buildings, public access routes, and utilities such as power lines and buildings, and identifying the trees to be removed basis the assessment
- KU3.** the relevant documentation to be carried out with respect to the assessment of possible dangers presented by trees
- KU4.** use of the relevant accessories such as ropes, harnesses, ladders and PPE for climbing trees, and the importance of checking them for safety before use
- KU5.** how to climb and manoeuvre in and around trees using accessories such as ropes, harnesses, ladders, etc.
- KU6.** the importance and process of using the relevant PPE during various arboriculture activities
- KU7.** how to ensure the protection of co-workers and passers-by while working on trees
- KU8.** the process of determining the need to remove treetops or large branches from treetops and carrying out tree topping
- KU9.** the recommended safety practices to be followed while removing fallen, storm-damaged or unwanted trees
- KU10.** the use of relevant arboriculture tools and equipment, such as a chainsaw, chipper, stump grinder, mower, brush-cutter, pruner, trimmer, mulcher, etc
- KU11.** the process of removing stumps of the removed/ felled trees
- KU12.** the process of carrying out backfilling after uprooting any trees, plants, and shrubs
- KU13.** the process of root pruning
- KU14.** how to prune appropriately to encourage healthy growth of trees, woody plants and shrubs without causing any damage and obstructions in their surroundings
- KU15.** different ways to control roots that invade underground pipes and wires
- KU16.** how to calculate the cost of removing a tree
- KU17.** the process of removing a tree, including tree felling and stump removal
- KU18.** the importance of planning pruning cuts appropriately and safely as per pruning standards
- KU19.** how to prune trees, plants and shrubs correctly in different shapes for aesthetics
- KU20.** the process of sectional or clear-felling and tree removal
- KU21.** the importance and process of backfilling after uprooting a tree
- KU22.** how to perform tree surgery
- KU23.** the process of rehabilitating degraded sites
- KU24.** the effects of plants and trees on degraded sites

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- KU25.** how to improve safety around large, heavy and potentially hazardous tree limbs
- KU26.** the appropriate measures to be taken to preserve old and valuable trees
- KU27.** the process of turf management
- KU28.** the process of carrying out tree topping
- KU29.** the varieties of weeds found growing around trees, woody plants and shrubs and the process of removing them
- KU30.** the process of identifying weeds and controlling them following the appropriate control measures
- KU31.** use of the recommended organic and inorganic fertilizers to the soil in the recommended quantity for the healthy growth of trees, plants and shrubs
- KU32.** the relevant groundwork carried out around trees
- KU33.** how to carry out minor repair and maintenance of the relevant tools and equipment
- KU34.** the appropriate turf management practices carried out around trees, woody plants and shrubs
- KU35.** potential threats presented by trees and their roots to surrounding structures and utilities
- KU36.** the most common safety incidents in arboriculture operations, such as falling from trees or injuries caused by power tools and how to avoid them
- KU37.** the characteristics of various rope constructions materials
- KU38.** how to make the best rope selection and perform rope maintenance,
- KU39.** different tree support mechanisms, such as cabling, bracing, and guying
- KU40.** the use of climbing gear and the effective climbing techniques
- KU41.** the tree strengthening operations
- KU42.** the best practices for rigging in arboriculture
- KU43.** the appropriate safety standards, PPE, and other essential guidelines to help one deal with occupational hazards effectively

Generic Skills (GS)

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

- GS1.** maintain work-related notes and records
- GS2.** communicate politely and professionally
- GS3.** read the relevant literature to learn about the latest developments in the field of work
- GS4.** perform work-related calculations
- GS5.** listen attentively to understand the information/ instructions being shared
- GS6.** plan and prioritize tasks to ensure timely completion
- GS7.** coordinate with the co-workers to achieve the work objectives
- GS8.** evaluate all possible solutions to a problem to select the best one
- 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>Carry out pruning and felling activities</i> | 13 | 18 | - | 13 |
| PC1. identify the requirement of pruning trees, plants and shrubs through examination, and discussion with the client, as applicable | - | - | - | - |
| PC2. assist engineers, solicitors, and mortgage and insurance companies in carrying out relevant assessments regarding the trees and their root systems threatening the surroundings and buildings | - | - | - | - |
| PC3. identify the need to remove trees threatening the structural integrity of buildings, public access routes, and utilities such as power lines | - | - | - | - |
| PC4. calculate the cost of removing the identified trees | - | - | - | - |
| PC5. carry out appropriate documentation regarding the assessment of possible dangers presented by trees | - | - | - | - |
| PC6. ensure the worksite is safe for carrying out work with no passers-by and distractions | - | - | - | - |
| PC7. set up necessary safety signs around the worksite and ensure the presence of a team member on the ground while carrying out arboriculture operations at heights | - | - | - | - |
| PC8. arrange the appropriate manual/power tools and equipment, such as secateurs, handsaw/chainsaw and hedge trimmers for tree pruning or surgery operations and prepare them for use | - | - | - | - |
| PC9. prune trees, plants and shrubs and remove the dead/ diseased/ declining ones using the relevant hand and power tools and equipment, such as pruning shears or chainsaw | - | - | - | - |
| PC10. identify the need to remove treetops or large branches from treetops and carry out tree topping using the appropriate tools and equipment | - | - | - | - |

Qualification Pack

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| PC11. follow the rigging technique to slowly lower down branches that are too large and may cause property damage or harm to other trees or plants | - | - | - | - |
| PC12. follow the recommended safety practices while removing fallen, storm-damaged or unwanted trees | - | - | - | - |
| PC13. remove stumps of the removed/ felled trees | - | - | - | - |
| PC14. carry out backfilling after uprooting any trees, plants, and shrubs | - | - | - | - |
| PC15. ensure to carry out pruning appropriately to encourage healthy growth of trees, plants and shrubs without causing any obstructions in their surroundings | - | - | - | - |
| PC16. identify and remove any weeds growing in the vicinity of the grown trees, plants and shrubs, | - | - | - | - |
| <i>Carry out bracing, cabling, bolting and tree surgery</i> | 3 | 5 | - | 3 |
| PC17. carry out bracing by bolting metal rods to prevent two branches from splitting apart | - | - | - | - |
| PC18. carry out cabling by attaching a steel cable between two branches to restrict their movement | - | - | - | - |
| PC19. carry out bolting to support split trunks or branches, and maintain tree limbs apart that may rub against each other | - | - | - | - |
| PC20. install props of timber logs or metal stakes with padded supports under the fruiting tree branches to provide them temporary support during fruiting | - | - | - | - |
| PC21. determine the need to carry out tree surgery, e.g. crown thinning, cavity treatment, crown lifting, pollarding, limb removal, dead wooding, etc. | - | - | - | - |
| PC22. perform tree surgery, taking the appropriate precautions | - | - | - | - |
| <i>Ensure safety in arboriculture operations</i> | 11 | 13 | - | 11 |

Qualification Pack

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| PC23. arrange the relevant Personal Protective Equipment (PPE), such as tree climbing gear, hard hat, protective gloves, safety goggles, face shield, earplugs/earmuffs, etc. | - | - | - | - |
| PC24. check all the PPE to ensure it is in usable condition and coordinate with the supervisor to replace the faulty ones | - | - | - | - |
| PC25. check the work environment to identify potential hazards and take appropriate preventive measures within own limits of authority or coordinate with the supervisor | - | - | - | - |
| PC26. use the relevant PPE while applying any harmful chemicals, such as pesticides | - | - | - | - |
| PC27. use earmuffs to ensure the protection of eardrums from exposure to loud noises generated by power tools | - | - | - | - |
| PC28. use safety goggles or a face shield to protect the eyes from debris and wood chips expelled during pruning | - | - | - | - |
| PC29. use safety gloves for better grip and to avoid rope burns and injuries from pieces of wood or thorns | - | - | - | - |
| PC30. use steel toe boots to get a firm grip on the ground and tree branches | - | - | - | - |
| PC31. ensure not to carry out arboriculture operations under the influence of medication or intoxicants | - | - | - | - |
| PC32. arrange the relevant accessories such as ropes, harnesses, ladders and PPE for climbing trees and check them to ensure they are safe for use | - | - | - | - |
| PC33. follow the recommended safe climbing techniques to avoid falling while climbing trees | - | - | - | - |
| PC34. climb up trees using ropes, harness, safety belt and ladder, ensuring the protection of others in the surroundings, such as co-workers and passers-by | - | - | - | - |

Qualification Pack

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| PC35. use the manual and power tools and equipment, e.g. chainsaw, safely as per the manufacturer's instructions | - | - | - | - |
| <i>Carry out regular maintenance activities</i> | 3 | 4 | - | 3 |
| PC36. carry out groundwork using the chainsaw and chipper | - | - | - | - |
| PC37. carry out minor repair and maintenance of the relevant tools and equipment as per the manufacturers' instructions | - | - | - | - |
| PC38. coordinate with the supervisor or relevant expert to resolve any complex issues experienced with tools and equipment | - | - | - | - |
| PC39. assist in the management of the turf surrounding trees, plants and shrubs | - | - | - | - |
| NOS Total | 30 | 40 | - | 30 |

Qualification Pack

National Occupational Standards (NOS) Parameters

| | |
|----------------------------|---|
| NOS Code | AGR/N6137 |
| NOS Name | Carry out pruning, felling and other maintenance activities |
| Sector | Agriculture |
| Sub-Sector | Forestry, Environment and Renewable Energy Management |
| Occupation | Agro-Forestry Management |
| NSQF Level | 4 |
| Credits | 2 |
| Version | 1.0 |
| Last Reviewed Date | NA |
| Next Review Date | 05/01/2026 |
| NSQC Clearance Date | 05/01/2023 |

Qualification Pack

AGR/N6138: Perform general maintenance of trees

Description

This OS unit is about carrying out general maintenance of trees, including cleaning, treating physical damage and moving them.

Scope

The scope covers the following :

- Perform tree cleaning
- Treat the physical damage on trees
- Treat tree poisoning and remove nails and tree guards
- Move trees and create and place nests on trees

Elements and Performance Criteria

Perform tree cleaning

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

PC1. identify and remove mosses from trees

PC2. perform cleaning of trees using water and the appropriate cleaning solutions

Treat the physical damage on trees

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

PC3. assess the physical damage on trees, such as engravings and treat them appropriately

PC4. determine the need for plastering tree branches and plaster them using the recommended treatment and aids

PC5. apply the recommended treatment to heal the tree parts with their bark removed

PC6. identify cracks on trees and apply the recommended treatment to treat them

Treat tree poisoning and remove nails and tree guards

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

PC7. identify the symptoms of poisoning in trees

PC8. treat tree poisoning, taking the appropriate tree protection measures

PC9. identify the need to remove tree nails and remove the nails using the appropriate tools and equipment, ensuring minimum damage to trees

PC10. identify the need to remove tree guards and remove them, protecting trees from damage

PC11. remove the outgrowth of sacred fig (peepal) tree from residential areas and re-transplant it in the appropriate places

PC12. provide the appropriate day-care for trees

Move trees and create and place nests on trees

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

PC13. assist in moving trees, ensuring to protect them during the process

PC14. create nests and place them appropriately on trees

Qualification Pack

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the process of performing the cleaning of trees and the appropriate cleaning solutions to be used
- KU2.** how to assess physical damage on trees and treat them
- KU3.** the process of plastering tree branches and using the recommended treatment and aids
- KU4.** the recommended treatment to be applied to heal the tree parts with their bark removed
- KU5.** how to treat the cracks on trees
- KU6.** the symptoms of poisoning in trees and the appropriate treatment for treating it
- KU7.** how to remove the nails from trees using the appropriate tools and equipment
- KU8.** the process of removing and re-transplanting the outgrowth of sacred fig (peepal) tree
- KU9.** the process of moving trees and the appropriate precautions to be taken
- KU10.** how to create and place nests on trees

Generic Skills (GS)

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

- GS1.** read the relevant literature to learn about the latest developments in the field of work
- GS2.** listen attentively to understand the information/ instructions being shared
- GS3.** maintain work-related notes and records
- GS4.** communicate politely and professionally
- GS5.** plan and prioritize tasks to ensure timely completion
- GS6.** coordinate with the co-workers to achieve the work objectives
- GS7.** evaluate all possible solutions to a problem to select the best one
- GS8.** 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>Perform tree cleaning</i> | 5 | 6 | - | 5 |
| PC1. identify and remove mosses from trees | - | - | - | - |
| PC2. perform cleaning of trees using water and the appropriate cleaning solutions | - | - | - | - |
| <i>Treat the physical damage on trees</i> | 9 | 12 | - | 9 |
| PC3. assess the physical damage on trees, such as engravings and treat them appropriately | - | - | - | - |
| PC4. determine the need for plastering tree branches and plaster them using the recommended treatment and aids | - | - | - | - |
| PC5. apply the recommended treatment to heal the tree parts with their bark removed | - | - | - | - |
| PC6. identify cracks on trees and apply the recommended treatment to treat them | - | - | - | - |
| <i>Treat tree poisoning and remove nails and tree guards</i> | 11 | 16 | - | 11 |
| PC7. identify the symptoms of poisoning in trees | - | - | - | - |
| PC8. treat tree poisoning, taking the appropriate tree protection measures | - | - | - | - |
| PC9. identify the need to remove tree nails and remove the nails using the appropriate tools and equipment, ensuring minimum damage to trees | - | - | - | - |
| PC10. identify the need to remove tree guards and remove them, protecting trees from damage | - | - | - | - |
| PC11. remove the outgrowth of sacred fig (peepal) tree from residential areas and re-transplant it in the appropriate places | - | - | - | - |
| PC12. provide the appropriate day-care for trees | - | - | - | - |
| <i>Move trees and create and place nests on trees</i> | 5 | 6 | - | 5 |

Qualification Pack

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| PC13. assist in moving trees, ensuring to protect them during the process | - | - | - | - |
| PC14. create nests and place them appropriately on trees | - | - | - | - |
| NOS Total | 30 | 40 | - | 30 |

Qualification Pack

National Occupational Standards (NOS) Parameters

| | |
|----------------------------|---|
| NOS Code | AGR/N6138 |
| NOS Name | Perform general maintenance of trees |
| Sector | Agriculture |
| Sub-Sector | Forestry, Environment and Renewable Energy Management |
| Occupation | Agro-Forestry Management |
| NSQF Level | 4 |
| Credits | 2 |
| Version | 1.0 |
| Last Reviewed Date | 29/09/2023 |
| Next Review Date | 29/09/2026 |
| NSQC Clearance Date | 29/09/2023 |

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

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- 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> | 10 | 5 | - | 10 |
| 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 | - | - | - | - |
| <i>Maintain clean and safe workplace</i> | 15 | 15 | - | 15 |
| 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 | - | - | - | - |

Qualification Pack

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| 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 | - | - | - | - |
| <i>Administer appropriate emergency procedures</i> | 15 | 5 | - | 10 |
| 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 | - | - | - | - |
| NOS Total | 40 | 25 | - | 35 |

Qualification Pack

National Occupational Standards (NOS) Parameters

| | |
|----------------------------|---|
| NOS Code | AGR/N9903 |
| NOS Name | Maintain health and safety at the workplace |
| Sector | Agriculture |
| Sub-Sector | Generic |
| Occupation | Generic |
| NSQF Level | 4 |
| Credits | 1 |
| Version | 4.0 |
| Last Reviewed Date | 22/10/2024 |
| Next Review Date | 22/10/2027 |
| NSQC Clearance Date | 22/10/2024 |

Qualification Pack

DGT/VSQ/N0102: Employability Skills (60 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

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

- PC1.** identify employability skills required for jobs in various industries
- PC2.** identify and explore learning and employability portals

Constitutional values – Citizenship

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

- PC3.** recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.
- PC4.** follow environmentally sustainable practices

Becoming a Professional in the 21st Century

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

- PC5.** recognize the significance of 21st Century Skills for employment
- PC6.** practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

Basic English Skills

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

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- PC7.** use basic English for everyday conversation in different contexts, in person and over the telephone
- PC8.** read and understand routine information, notes, instructions, mails, letters etc. written in English
- PC9.** write short messages, notes, letters, e-mails etc. in English

Career Development & Goal Setting

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

- PC10.** understand the difference between job and career
- PC11.** prepare a career development plan with short- and long-term goals, based on aptitude

Communication Skills

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

- PC12.** follow verbal and non-verbal communication etiquette and active listening techniques in various settings
- PC13.** work collaboratively with others in a team

Diversity & Inclusion

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

- PC14.** communicate and behave appropriately with all genders and PwD
- PC15.** escalate any issues related to sexual harassment at workplace according to POSH Act

Financial and Legal Literacy

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

- PC16.** select financial institutions, products and services as per requirement
- PC17.** carry out offline and online financial transactions, safely and securely
- PC18.** identify common components of salary and compute income, expenses, taxes, investments etc
- PC19.** identify relevant rights and laws and use legal aids to fight against legal exploitation

Essential Digital Skills

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

- PC20.** operate digital devices and carry out basic internet operations securely and safely
- PC21.** use e- mail and social media platforms and virtual collaboration tools to work effectively
- PC22.** use basic features of word processor, spreadsheets, and presentations

Entrepreneurship

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

- PC23.** identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research
- PC24.** develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion
- PC25.** identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

Customer Service

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

- PC26.** identify different types of customers
- PC27.** identify and respond to customer requests and needs in a professional manner.

Qualification Pack

PC28. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC29. create a professional Curriculum vitae (Résumé)

PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively

PC31. apply to identified job openings using offline /online methods as per requirement

PC32. answer questions politely, with clarity and confidence, during recruitment and selection

PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills and different learning and employability related portals

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

KU4. Twenty first (21st) century skills and their importance

KU5. how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up

KU6. importance of career development and setting long- and short-term goals

KU7. about effective communication

KU8. POSH Act

KU9. Gender sensitivity and inclusivity

KU10. different types of financial institutes, products, and services

KU11. how to compute income and expenditure

KU12. importance of maintaining safety and security in offline and online financial transactions

KU13. different legal rights and laws

KU14. different types of digital devices and the procedure to operate them safely and securely

KU15. how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.

KU16. how to identify business opportunities

KU17. types and needs of customers

KU18. how to apply for a job and prepare for an interview

KU19. apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

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

GS1. read and write different types of documents/instructions/correspondence

GS2. communicate effectively using appropriate language in formal and informal settings

Qualification Pack

- GS3.** behave politely and appropriately with all
- GS4.** how to work in a virtual mode
- GS5.** perform calculations efficiently
- GS6.** solve problems effectively
- GS7.** pay attention to details
- GS8.** manage time efficiently
- GS9.** maintain hygiene and sanitization to avoid infection

Qualification Pack

Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <i>Introduction to Employability Skills</i> | 1 | 1 | - | - |
| PC1. identify employability skills required for jobs in various industries | - | - | - | - |
| PC2. identify and explore learning and employability portals | - | - | - | - |
| <i>Constitutional values – Citizenship</i> | 1 | 1 | - | - |
| PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc. | - | - | - | - |
| PC4. follow environmentally sustainable practices | - | - | - | - |
| <i>Becoming a Professional in the 21st Century</i> | 2 | 4 | - | - |
| PC5. recognize the significance of 21st Century Skills for employment | - | - | - | - |
| PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life | - | - | - | - |
| <i>Basic English Skills</i> | 2 | 3 | - | - |
| PC7. use basic English for everyday conversation in different contexts, in person and over the telephone | - | - | - | - |
| PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English | - | - | - | - |
| PC9. write short messages, notes, letters, e-mails etc. in English | - | - | - | - |
| <i>Career Development & Goal Setting</i> | 1 | 2 | - | - |

Qualification Pack

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|--------------|-----------------|---------------|------------|
| PC10. understand the difference between job and career | - | - | - | - |
| PC11. prepare a career development plan with short- and long-term goals, based on aptitude | - | - | - | - |
| <i>Communication Skills</i> | 2 | 2 | - | - |
| PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings | - | - | - | - |
| PC13. work collaboratively with others in a team | - | - | - | - |
| <i>Diversity & Inclusion</i> | 1 | 2 | - | - |
| PC14. communicate and behave appropriately with all genders and PwD | - | - | - | - |
| PC15. escalate any issues related to sexual harassment at workplace according to POSH Act | - | - | - | - |
| <i>Financial and Legal Literacy</i> | 2 | 3 | - | - |
| PC16. select financial institutions, products and services as per requirement | - | - | - | - |
| PC17. carry out offline and online financial transactions, safely and securely | - | - | - | - |
| PC18. identify common components of salary and compute income, expenses, taxes, investments etc | - | - | - | - |
| PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation | - | - | - | - |
| <i>Essential Digital Skills</i> | 3 | 4 | - | - |
| PC20. operate digital devices and carry out basic internet operations securely and safely | - | - | - | - |
| PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively | - | - | - | - |
| PC22. use basic features of word processor, spreadsheets, and presentations | - | - | - | - |

Qualification Pack

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|--|--------------|-----------------|---------------|------------|
| <i>Entrepreneurship</i> | 2 | 3 | - | - |
| PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research | - | - | - | - |
| PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion | - | - | - | - |
| PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity | - | - | - | - |
| <i>Customer Service</i> | 1 | 2 | - | - |
| PC26. identify different types of customers | - | - | - | - |
| PC27. identify and respond to customer requests and needs in a professional manner. | - | - | - | - |
| PC28. follow appropriate hygiene and grooming standards | - | - | - | - |
| <i>Getting ready for apprenticeship & Jobs</i> | 2 | 3 | - | - |
| PC29. create a professional Curriculum vitae (Résumé) | - | - | - | - |
| PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively | - | - | - | - |
| PC31. apply to identified job openings using offline /online methods as per requirement | - | - | - | - |
| PC32. answer questions politely, with clarity and confidence, during recruitment and selection | - | - | - | - |
| PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements | - | - | - | - |
| NOS Total | 20 | 30 | - | - |

Qualification Pack

National Occupational Standards (NOS) Parameters

| | |
|----------------------------|---------------------------------|
| NOS Code | DGT/VSQ/N0102 |
| NOS Name | Employability Skills (60 Hours) |
| Sector | Cross Sectoral |
| Sub-Sector | Professional Skills |
| Occupation | Employability |
| NSQF Level | 4 |
| Credits | 2 |
| Version | 1.0 |
| Last Reviewed Date | 18/02/2025 |
| Next Review Date | 18/02/2028 |
| NSQC Clearance Date | 18/02/2025 |

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 the proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on the knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for the theory part for each candidate at each examination/training centre (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training centre based on these criteria.
5. In case of successfully passing only a certain number of NOSs, the trainee is eligible to take a 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/N6135.Plan and plant trees, woody plants and shrubs | 30 | 40 | 0 | 30 | 100 | 20 |
| AGR/N6136.Perform pest, disease and nutrient management of trees, woody plants and shrubs | 30 | 40 | 0 | 30 | 100 | 25 |
| AGR/N6137.Carry out pruning, felling and other maintenance activities | 30 | 40 | 0 | 30 | 100 | 25 |
| AGR/N6138.Perform general maintenance of trees | 30 | 40 | 0 | 30 | 100 | 15 |
| AGR/N9903.Maintain health and safety at the workplace | 40 | 25 | - | 35 | 100 | 10 |
| DGT/VSQ/N0102.Employability Skills (60 Hours) | 20 | 30 | 0 | 0 | 50 | 5 |
| Total | 180 | 215 | - | 155 | 550 | 100 |

Qualification Pack

Acronyms

| | |
|-------------|---|
| NOS | National Occupational Standard(s) |
| NSQF | National Skills Qualifications Framework |
| QP | Qualifications Pack |
| TVET | Technical and Vocational Education and Training |
| PPE | Personal Protective Equipment |
| PPE | Personal Protective Equipment |
| PPE | Personal Protective Equipment |

Qualification Pack

Glossary

| | |
|--|--|
| Sector | 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. |
| Sub-sector | Sub-sector is derived from a further breakdown based on the characteristics and interests of its components. |
| Occupation | Occupation is a set of job roles, which perform similar/ related set of functions in an industry. |
| Job role | Job role defines a unique set of functions that together form a unique employment opportunity in an organisation. |
| Occupational Standards (OS) | 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. |
| Performance Criteria (PC) | Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task. |
| National Occupational Standards (NOS) | NOS are occupational standards which apply uniquely in the Indian context. |
| Qualifications Pack (QP) | 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. |
| Unit Code | Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N' |
| Unit Title | Unit title gives a clear overall statement about what the incumbent should be able to do. |
| Description | 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. |
| Scope | 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

| | |
|---|--|
| Knowledge and Understanding (KU) | 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. |
| Organisational Context | 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. |
| Technical Knowledge | Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities. |
| Core Skills/ Generic Skills (GS) | 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. |
| Electives | 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. |
| Options | 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. |