

## Qualification Pack



# Urban Forest Developer

QP Code: AGR/Q6106

Version: 2.0

NSQF Level: 4

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

## Qualification Pack

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### AGR/Q6106: Urban Forest Developer

#### Brief Job Description

Urban Forest Developer surveys the site, estimates the requirement of and make arrangements for collection of the local-biomass, prepares site and make design, create and maintains small, urban forest by using local biomass

#### Personal Attributes

The individual must be physically fit to work for extended durations both indoor and outdoor with the ability to make appropriate decisions independently. The person must have strong verbal and written communication skills to interact with various stakeholders. Analytical and problem-solving skills are the other important requirements in this job role.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [AGR/N6129: Comprehend the basics concepts of making a urban forest](#)
2. [AGR/N6130: Prepare for making a manmade urban forest](#)
3. [AGR/N6131: Follow relevant steps and process for making a manmade urban forest](#)
4. [AGR/N6132: Maintain the urban forest to make it self sustaining](#)
5. [AGR/N6133: Prepare natural manure and nutrients](#)
6. [AGR/N6128: Prepare Checklist for making and maintain an urban forest as per plan](#)
7. [AGR/N9903: Maintain health and safety at the workplace](#)
8. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro-Forestry Management

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<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Credits</b>	13
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/NIL
<b>Minimum Educational Qualification &amp; Experience</b>	<p>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 (plus 1-year NTC plus 1 year 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 relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.0 with minimum education as 8th Grade pass) with 3 Years of experience relevant experience OR Previous relevant Qualification of NSQF Level (Level 3.5 with 1.5- year relevant experience)</p>
<b>Minimum Level of Education for Training in School</b>	10th Class
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	16 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	26/05/2025
<b>NSQF Approval Date</b>	26/05/2022
<b>Version</b>	2.0
<b>Reference code on NQR</b>	QG-04-AG-00287-2023-V1.1-ASCI
<b>NQR Version</b>	1.1

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### AGR/N6129: Comprehend the basics concepts of making a urban forest

#### Description

This OS unit is about basics concepts of making an urban forest and basic tenets, conditions and limitations of Miyawaki forests

#### Scope

The scope covers the following :

- Grasp the basics concept of forest
- Comprehend basic tenets of Vrikshayurveda/Miyawaki forests
- Assimilate basic conditions required for Vrikshayurveda/Miyawaki forests

#### Elements and Performance Criteria

##### *Grasp the basics concept of forest*

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

- PC1.** Comprehend the meaning of forest and their constituents, elements and benefits
- PC2.** Recognize the meaning of a natural forest and the types, characteristics, layers of a natural-forest, interaction between their components, nurturing of forest and evolution of forest
- PC3.** Assimilate the concept of made forest and various techniques of manmade-forests
- PC4.** distinguish between (a) Manmade Forest Vs Natural Forest (b) Agro-forestry Plantation and Forest-Making
- PC5.** Comprehend the five basic elements of the Forest being a micro-cosmos of the planet-earth
- PC6.** Perceive interaction of the five basic-elements of forest and their effects
- PC7.** Classify the inhabitants of forest as per modern environmental-science
- PC8.** Recognize the niche of various species of plants and animals and their co-existence, co-operation and competition
- PC9.** Comprehend interplay of biotic and abiotic factors in the process of forest evolution
- PC10.** Exemplify how Forests are self-sustaining eco-zones
- PC11.** Explore Ancient and Modern Techniques of forest making
- PC12.** Recognize Panch-Tatva: Element of Forests- Earth, Air, Water, Sunlight and Space
- PC13.** cognize how the Panch-Tatva will effect urban forest making
- PC14.** Figure out Ancient Indian techniques of Forest-making-- Vedic-Van, Nakshatras-Van, Navagrahas-Van, Rashi-Van, Vrikshayurveda, Panchvati-forests
- PC15.** Comprehend the concept of Urban forestry and their management
- PC16.** Comprehend how the forests naturally originate – Primary succession and secondary succession.
- PC17.** Interpret forest food-chain
- PC18.** Make out how forests serve as a buffer in natural disasters like flood ,rainfalls etc.
- PC19.** Figure out how forest offer watershed protection, prevent soil erosion and mitigate climate change

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**PC20.** Prepare table of native and local trees of various Indian states and UTs

**PC21.** Enlist Reasons for deforestation in the world and their impact

*Comprehend basic tenets of Vrikshayurveda/Miyawaki forests*

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

**PC22.** Ensure that the selected trees are local, native and original trees of the area as these trees grow very well in local conditions owing to natural selection

**PC23.** ensure bio-diversity of local trees is maintained so that there is richness in flora i.e. different varieties of trees

**PC24.** avoid plating of exotic or foreign species plants

**PC25.** plant tree-saplings as if they exist in the nature

**PC26.** plant trees in very close proximity preferably 2-3 trees in the 1 square meter since tree develop as a family and support each other in growing through exchange of food and nutrients.

**PC27.** Create an eco-system where big trees should be complemented by small and auxiliary trees, shrubs or creepers.

**PC28.** Grow urban forest in natural environment without/least human-interference

*Assimilate basic conditions required for Vrikshayurveda/Miyawaki forests*

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

**PC29.** Carry out rigorous initial site survey and research of potential natural vegetation.

**PC30.** Select a community of variety of local trees for planting

**PC31.** Identify and collect a large number of various native seeds, locally or nearby and in a comparable geo-climatic context.

**PC32.** select the saplings or seeds which is local to selected site

**PC33.** propagate the seed in local area and germinated in a local nursery

**PC34.** prepare soil cover if it is very degraded by adding local bio mass in the soil and Soil should have perforators and retainers

**PC35.** cover and protect the roots by mulching the soil cover with organic material

**PC36.** carryout plantation respecting biodiversity inspired by the model of the natural forest.

**PC37.** carryout dense plantation of very young seedlings which already have a mature root system. Check the presence of symbiotic bacteria and fungi in matured root system

**PC38.** carryout plantations randomly distributed in space in the way plants are distributed in a clearing or at the edge of the natural forest, not in rows or staggered

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** relevant applicable government legislation, standards, policies, and procedures at work

**KU2.** relevant health and safety requirements applicable to the work environment

**KU3.** meaning of forest, their constituents, types, benefits of forests- direct and indirect

**KU4.** classification of forests - High forests, coppice forests, virgin forest and second growth forests, pure and mixed forests etc.

**KU5.** Elements of a Forest: Biotic and Abiotic,

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- KU6.** FAO definition of Forests
- KU7.** Agroforestry - farm forestry, social forestry, joint forest management - concepts, programmes and objectives
- KU8.** Natural forest and the types, Characteristics and Layers of a Natural-Forest, interaction between their components, nurturing of forest and evolution of forest
- KU9.** self-sustenance, interdependent and self-reviving ecosystem of natural forest
- KU10.** concept of made Forest and various techniques of Manmade-Forests
- KU11.** Difference between-(1) Manmade Forest Vs Natural Forest (2) Ancient and Modern Techniques of forest making (3) Agro-forestry Plantation and Forest-Making
- KU12.** Panch-Tatva: Element of Forests- Earth, Air, Water, Sunlight and Space
- KU13.** Ancient Indian techniques of Forest-making-- Vedic-Van, Nakshatras-Van, Navagrahas-Van, Rashi-Van, Vrikshayurveda, Panchvati-forests
- KU14.** Modern technique of Forest Making: Miyawaki, Its basic tenets, Its application, Limitations of Miyawaki
- KU15.** five basic elements of the Forest being a micro-cosmos of the planet-earth
- KU16.** interaction of the five basic-elements of forest and their effects
- KU17.** inhabitants of forest as per modern environmental-science
- KU18.** biotic and abiotic inhabitants of forest
- KU19.** niche of various species of plants and animals and their co-existence, co-operation and competition
- KU20.** Global warming - forestry options for mitigation and adaptation - carbon sequestration
- KU21.** natural vegetation restoration of degraded land
- KU22.** how Forests are self-sustaining eco-zones
- KU23.** forest food-chain and Biodiversity of forest
- KU24.** Forests serve as a buffer in natural disasters like flood and rainfalls
- KU25.** forest offer watershed protection, prevent soil erosion and mitigate climate change
- KU26.** General problems of forest development and economy.
- KU27.** Forest based industries in the developed and developing countries.
- KU28.** Urban forestry - definition and scope - uses of urban forests
- KU29.** Management of urban forest-Arbiculture and its importance in urban forestry
- KU30.** National and state level programmes on degraded lands/ wasteland development
- KU31.** how the forests naturally originate - Primary succession and secondary succession
- KU32.** native and local trees of various Indian states and UTs
- KU33.** Reasons for deforestation in the world and their impact
- KU34.** reforestation and afforestation
- KU35.** three distinct layers in any Natural-forest viz, Forest-canopy, Forest-floor and Forest-soil.

## Generic Skills (GS)

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

- GS1.** write work-related notes

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- GS2.** read the relevant guides and manuals
- GS3.** communicate clearly and politely
- GS4.** listen attentively to understand the information/ instructions being given
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** take quick decisions to deal with workplace emergencies/ accidents
- GS7.** identify possible disruptions to work and take preventive measures
- GS8.** co-ordinate with co-workers to achieve the work objectives

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### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Grasp the basics concept of forest</i>	10	5	-	5
<b>PC1.</b> Comprehend the meaning of forest and their constituents, elements and benefits	-	-	-	-
<b>PC2.</b> Recognize the meaning of a natural forest and the types, characteristics, layers of a natural-forest, interaction between their components, nurturing of forest and evolution of forest	-	-	-	-
<b>PC3.</b> Assimilate the concept of made forest and various techniques of manmade-forests	-	-	-	-
<b>PC4.</b> distinguish between (a) Manmade Forest Vs Natural Forest (b) Agro-forestry Plantation and Forest-Making	-	-	-	-
<b>PC5.</b> Comprehend the five basic elements of the Forest being a micro-cosmos of the planet-earth	-	-	-	-
<b>PC6.</b> Perceive interaction of the five basic-elements of forest and their effects	-	-	-	-
<b>PC7.</b> Classify the inhabitants of forest as per modern environmental-science	-	-	-	-
<b>PC8.</b> Recognize the niche of various species of plants and animals and their co-existence, co-operation and competition	-	-	-	-
<b>PC9.</b> Comprehend interplay of biotic and abiotic factors in the process of forest evolution	-	-	-	-
<b>PC10.</b> Exemplify how Forests are self-sustaining eco-zones	-	-	-	-
<b>PC11.</b> Explore Ancient and Modern Techniques of forest making	-	-	-	-
<b>PC12.</b> Recognize Panch-Tatva: Element of Forests-Earth, Air, Water, Sunlight and Space	-	-	-	-
<b>PC13.</b> cognize how the Panch-Tatva will effect urban forest making	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> Figure out Ancient Indian techniques of Forest-making-- Vedic-Van, Nakshatras-Van, Navagrahas-Van, Rashi-Van, Vrikshayurveda, Panchvati-forests	-	-	-	-
<b>PC15.</b> Comprehend the concept of Urban forestry and their management	-	-	-	-
<b>PC16.</b> Comprehend how the forests naturally originate - Primary succession and secondary succession.	-	-	-	-
<b>PC17.</b> Interpret forest food-chain	-	-	-	-
<b>PC18.</b> Make out how forests serve as a buffer in natural disasters like flood ,rainfalls etc.	-	-	-	-
<b>PC19.</b> Figure out how forest offer watershed protection, prevent soil erosion and mitigate climate change	-	-	-	-
<b>PC20.</b> Prepare table of native and local trees of various Indian states and UTs	-	-	-	-
<b>PC21.</b> Enlist Reasons for deforestation in the world and their impact	-	-	-	-
<i>Comprehend basic tenets of Vrikshayurveda/Miyawaki forests</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC22.</b> Ensure that the selected trees are local, native and original trees of the area as these trees grow very well in local conditions owing to natural selection	-	-	-	-
<b>PC23.</b> ensure bio-diversity of local trees is maintained so that there is richness in flora i.e. different varieties of trees	-	-	-	-
<b>PC24.</b> avoid plating of exotic or foreign species plants	-	-	-	-
<b>PC25.</b> plant tree-saplings as if they exist in the nature	-	-	-	-
<b>PC26.</b> plant trees in very close proximity preferably 2-3 trees in the 1 square meter since tree develop as a family and support each other in growing through exchange of food and nutrients.	-	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC27.</b> Create an eco-system where big trees should be complemented by small and auxiliary trees, shrubs or creepers.	-	-	-	-
<b>PC28.</b> Grow urban forest in natural environment without/least human-interference	-	-	-	-
<i>Assimilate basic conditions required for Vrikshayurveda/Miyawaki forests</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC29.</b> Carry out rigorous initial site survey and research of potential natural vegetation.	-	-	-	-
<b>PC30.</b> Select a community of variety of local trees for planting	-	-	-	-
<b>PC31.</b> Identify and collect a large number of various native seeds, locally or nearby and in a comparable geo-climatic context.	-	-	-	-
<b>PC32.</b> select the saplings or seeds which is local to selected site	-	-	-	-
<b>PC33.</b> propagate the seed in local area and germinated in a local nursery	-	-	-	-
<b>PC34.</b> prepare soil cover if it is very degraded by adding local bio mass in the soil and Soil should have perforators and retainers	-	-	-	-
<b>PC35.</b> cover and protect the roots by mulching the soil cover with organic material	-	-	-	-
<b>PC36.</b> carryout plantation respecting biodiversity inspired by the model of the natural forest.	-	-	-	-
<b>PC37.</b> carryout dense plantation of very young seedlings which already have a mature root system. Check the presence of symbiotic bacteria and fungi in matured root system	-	-	-	-
<b>PC38.</b> carryout plantations randomly distributed in space in the way plants are distributed in a clearing or at the edge of the natural forest, not in rows or staggered	-	-	-	-
<b>NOS Total</b>	<b>20</b>	<b>15</b>	-	<b>15</b>

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### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N6129
<b>NOS Name</b>	Comprehend the basics concepts of making a urban forest
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro-Forestry Management
<b>NSQF Level</b>	4
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	26/05/2022
<b>Next Review Date</b>	15/08/2023
<b>NSQC Clearance Date</b>	15/02/2023

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### AGR/N6130: Prepare for making a manmade urban forest

#### Description

This OS unit is about preparation for making a manmade urban forest like location assessment for making the urban forest, coordination with clients, setting up nodal points for procurement of bio mass, procurements of authentic saplings and ensuring availability of labour and other required resources

#### Scope

The scope covers the following :

- Assess the location for making the urban forest
- Coordinate with the client for making urban forest
- Set up nodal points and procure Bio-waste/biomass
- Coordinate with the nursery for procuring authentic saplings
- Coordinate for availability of labour and other required resources

#### Elements and Performance Criteria

##### *Assess the location for making the urban forest*

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

- PC1.** conduct survey of contiguous and adjacent land for better understanding the site for the forest
- PC2.** locate a site, place or location (viz. garbage-dump yards (after removing the non-biodegradable items), unused plots, land along the river flow, urban-plots, farmhouses, factory-premises, schools, common land in villages, etc) for creating a mini-forest which is suitable for making and sustaining a forest.
- PC3.** ensure selected site comply with relevant applicable government legislation, standards, policies, and procedures
- PC4.** Identify appropriate location/space for the urban forestry which fulfils the requirements for setting up urban forest and comply with the applicable government regulations in that region
- PC5.** Select the site which is an open-land and have a good layer of soil
- PC6.** Ensure that selected space is not susceptible to damage stray cattle or debris or any other related factors
- PC7.** Ensure that soil-land should be free of any pebbles, boulders, garbage or stones like rocks etc.
- PC8.** Ensure that the site is free from the nest or burrow of snakes
- PC9.** Ensure that the site is free of any chemicals, pesticides or hazardous waste
- PC10.** Avoid any site where currently agrarian practice is going on
- PC11.** Prepare a map of the site which should include the shape, direction, gradation and location of the site
- PC12.** Determine the closeness of planting zone from built structure to ensure that root structures or canopy do not damage the built structure in the future
- PC13.** ensure the site is accessible and has availability of quality water, labour and other inputs

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- PC14.** Ensure that level or gradients of the site is even. If the land has an uneven-level, then fill the lower area with soil
- PC15.** Ascertain the direction of the sun with respect to the direction of the selected site as urban forest requires good amount of sunlight to grow and this will help in the placement of tree-saplings and plants accordingly.
- PC16.** Ensure the selected site is properly fenced and protected from all sides so as to save the nascent saplings from stray-animals.
- PC17.** ascertain that the site is clear from any underground sewerage drain or electricity or gas pipeline or any overhead electric-transmissions
- PC18.** Ascertain the previous use history of the site and the flora and fauna of the selected area
- PC19.** Carryout survey of the native trees which have been there in the area within the radius of 250 kms
- PC20.** Prepare a design of the site with a specific plan including the day of plantation, average-cost, a pathway for human access, how to maintain and sustain the Mini-Forest etc
- PC21.** identify the risks associated with the establishment of urban forest at the site and take appropriate preventive measures

### *Coordinate with the client for making urban forest*

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

- PC22.** conduct a site survey to assess various parameters including the client requirements
- PC23.** ensure that the site has a conducive environment for supporting in making urban forest
- PC24.** measure the available space for the purpose of preparing a layout
- PC25.** prepare a layout based on the available space and client preferences conforming to applicable government regulation in that region
- PC26.** ensure the layout allows for proper plant density for making urban forest
- PC27.** identify the relevant plants, trees and shrubs for the urban forest
- PC28.** select various forest features and structures to be installed in coordination with the client
- PC29.** plan the placement of various plants and features suggested by client with disturbing the forest ecology
- PC30.** follow rules and regulations of the govt, permissions for growing specific category of trees
- PC31.** select various material required for setting up urban forest
- PC32.** prepare the cost estimates for setting up a urban forest

### *Set up nodal points and procure bio-waste/biomass*

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

- PC33.** assess and identify the area where collection points may be set-up which is easily accessible and all the equipment's, tools, logistic required for procurement of bio waste are available
- PC34.** prepare a road map to effectively get the task accomplished
- PC35.** undertake proper setup of collection points in different villages to collect the stock from various suppliers (farmers) and coordinate with different collection points
- PC36.** Identify supplier and make negotiations with suppliers on right prices and required quality of bio-waste and place order
- PC37.** procure bio-waste at best possible price to w.r.t quality, quantity, time and location
- PC38.** ensure payments to suppliers after assessing quantity and quality of bio-waste

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- PC39.** ensure that collected and procured bio-resides are stored at appropriate place and correct manner to avoid wastage
- PC40.** manage the inventories that are procured efficiently and effectively
- PC41.** maintain appropriate temperature, humidity and controlled atmosphere during storage
- PC42.** ensure that collected bio waste/biomass are converted to manure for utilization in urban forest

### *Coordinate with the nursery for procuring authentic saplings*

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

- PC43.** procure the sapling/seed from authorized source like nurseries belonging to the Forest Department or Agriculture universities/colleges
- PC44.** ensure that procured sapling is disease free and adaptable to selected site
- PC45.** select the appropriate sapling to be transplanted based on the agroclimatic condition of selected sites
- PC46.** select sapling preferably of a height of 2 feet
- PC47.** procure sapling which have sprouted out from the local available seeds
- PC48.** procure a minimum of 25-30 varieties of local native plants to attain bio-diversity
- PC49.** Select appropriate species of plant which suits best in out periphery of forest and in inner part
- PC50.** Select appropriate plant species which suits best to the wind direction on the selected site
- PC51.** avoid getting any exotic or foreign species of plant-saplings
- PC52.** treat the planting materials/seeds (if required) with the recommended organic pesticides and fungicides in the recommended dose by appropriate methods/techniques
- PC53.** store the treated planting materials/seeds at the recommended temperature and humidity, ensuring hygienic conditions in the storage area
- PC54.** prepare a list of the available plants in the local nurseries
- PC55.** keep the procured saplings at the site preferably 2 days in advance

### *Coordinate for availability of labour and other required resources*

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

- PC56.** Compute the requirement of number of labour for the making urban forest and arrange for the same
- PC57.** identify a vendor to purchase the material required for setting up the forest such as planting material, fertilizers, pesticides/ insecticides, labour, etc.
- PC58.** purchase the material in the required number/ quantity
- PC59.** store the material as per the relevant storage, health and safety requirements
- PC60.** organise the relevant tools, equipment and Personal Protective Equipment (PPE)
- PC61.** maintain the record of purchase

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the relevant government regulations governing the site selection for forest making
- KU2.** Site pre-requisites for making the urban forest

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- KU3.** nursery practice viz. seed collection, seed pre-treatment- nursery stock preparation- field preparation- marking, alignment and stacking, pit making-planting etc.
- KU4.** various tending operations- weeding, cleaning, singling, pruning, pollarding, lopping, and thinning- fertilization in trees-plant protection and sanitation measures etc.
- KU5.** business code of conduct to deal with clients
- KU6.** applicable record-keeping requirements in the job role
- KU7.** relevant tools, implements and PPE required for setting up an urban forest
- KU8.** various parameters to assess before establishing an urban forest
- KU9.** different types of manmade forest and their features
- KU10.** plant/ tree/ shrub varieties suitable for an urban forest
- KU11.** different types materials required for setting up an urban forest
- KU12.** the practice of plant rotation and shifting
- KU13.** storage requirements for various planting material
- KU14.** basic accounting and inventory management
- KU15.** Organization policies on: incentives, delivery standards, and personnel.
- KU16.** Quality standards set by the organization.
- KU17.** Availability of stock with respect to season, climate etc.
- KU18.** Resources and supply source planning.
- KU19.** Contract management.
- KU20.** Quality, quantity, price, source and time of the stock
- KU21.** How to carryout survey of site for making urban forest
- KU22.** Preparation of map of the site which should include the shape, direction, gradation and location of the site
- KU23.** How to prepare a design/layout of the site with a specific plan including the day of plantation, average-cost, a pathway for human access, how to maintain and sustain the Mini-Forest etc.
- KU24.** Various risks associated with the establishment of urban forest at the site and appropriate preventive measures
- KU25.** various forest features and structures to be installed
- KU26.** rules and regulations of the govt, permissions for growing specific category of trees
- KU27.** various material required for setting up urban forest
- KU28.** estimate cost for setting up an urban forest
- KU29.** various source of bio wastes their source
- KU30.** various authorized source of saplings/seed for making forest
- KU31.** appropriate sapling for transplanting based on the agroclimatic condition
- KU32.** local varieties of plants suitable to agroclimatic condition
- KU33.** computation of labour requirement for various task/activities involved in forest making
- KU34.** relevant tools, equipment and Personal Protective Equipment (PPE) required for forest making
- KU35.** record keeping for various required resources

## Generic Skills (GS)

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

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

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### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assess the location for making the urban forest</i>	<b>10</b>	<b>10</b>	-	<b>5</b>
<b>PC1.</b> conduct survey of contiguous and adjacent land for better understanding the site for the forest	-	-	-	-
<b>PC2.</b> locate a site, place or location (viz. garbage-dump yards (after removing the non-biodegradable items), unused plots, land along the river flow, urban-plots, farmhouses, factory-premises, schools, common land in villages, etc) for creating a mini-forest which is suitable for making and sustaining a forest.	-	-	-	-
<b>PC3.</b> ensure selected site comply with relevant applicable government legislation, standards, policies, and procedures	-	-	-	-
<b>PC4.</b> Identify appropriate location/space for the urban forestry which fulfils the requirements for setting up urban forest and comply with the applicable government regulations in that region	-	-	-	-
<b>PC5.</b> Select the site which is an open-land and have a good layer of soil	-	-	-	-
<b>PC6.</b> Ensure that selected space is not susceptible to damage stray cattle or debris or any other related factors	-	-	-	-
<b>PC7.</b> Ensure that soil-land should be free of any pebbles, boulders, garbage or stones like rocks etc.	-	-	-	-
<b>PC8.</b> Ensure that the site is free from the nest or burrow of snakes	-	-	-	-
<b>PC9.</b> Ensure that the site is free of any chemicals, pesticides or hazardous waste	-	-	-	-
<b>PC10.</b> Avoid any site where currently agrarian practice is going on	-	-	-	-
<b>PC11.</b> Prepare a map of the site which should include the shape, direction, gradation and location of the site	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> Determine the closeness of planting zone from built structure to ensure that root structures or canopy do not damage the built structure in the future	-	-	-	-
<b>PC13.</b> ensure the site is accessible and has availability of quality water, labour and other inputs	-	-	-	-
<b>PC14.</b> Ensure that level or gradients of the site is even. If the land has an uneven-level, then fill the lower area with soil	-	-	-	-
<b>PC15.</b> Ascertain the direction of the sun with respect to the direction of the selected site as urban forest requires good amount of sunlight to grow and this will help in the placement of tree-saplings and plants accordingly.	-	-	-	-
<b>PC16.</b> Ensure the selected site is properly fenced and protected from all sides so as to save the nascent saplings from stray-animals.	-	-	-	-
<b>PC17.</b> ascertain that the site is clear from any underground sewerage drain or electricity or gas pipeline or any overhead electric-transmissions	-	-	-	-
<b>PC18.</b> Ascertain the previous use history of the site and the flora and fauna of the selected area	-	-	-	-
<b>PC19.</b> Carryout survey of the native trees which have been there in the area within the radius of 250 kms	-	-	-	-
<b>PC20.</b> Prepare a design of the site with a specific plan including the day of plantation, average-cost, a pathway for human access, how to maintain and sustain the Mini-Forest etc	-	-	-	-
<b>PC21.</b> identify the risks associated with the establishment of urban forest at the site and take appropriate preventive measures	-	-	-	-
<i>Coordinate with the client for making urban forest</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC22.</b> conduct a site survey to assess various parameters including the client requirements	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC23.</b> ensure that the site has a conducive environment for supporting in making urban forest	-	-	-	-
<b>PC24.</b> measure the available space for the purpose of preparing a layout	-	-	-	-
<b>PC25.</b> prepare a layout based on the available space and client preferences conforming to applicable government regulation in that region	-	-	-	-
<b>PC26.</b> ensure the layout allows for proper plant density for making urban forest	-	-	-	-
<b>PC27.</b> identify the relevant plants, trees and shrubs for the urban forest	-	-	-	-
<b>PC28.</b> select various forest features and structures to be installed in coordination with the client	-	-	-	-
<b>PC29.</b> plan the placement of various plants and features suggested by client with disturbing the forest ecology	-	-	-	-
<b>PC30.</b> follow rules and regulations of the govt, permissions for growing specific category of trees	-	-	-	-
<b>PC31.</b> select various material required for setting up urban forest	-	-	-	-
<b>PC32.</b> prepare the cost estimates for setting up a urban forest	-	-	-	-
<i>Set up nodal points and procure bio-waste/biomass</i>	<b>5</b>	<b>5</b>	-	<b>10</b>
<b>PC33.</b> assess and identify the area where collection points may be set-up which is easily accessible and all the equipment's, tools, logistic required for procurement of bio waste are available	-	-	-	-
<b>PC34.</b> prepare a road map to effectively get the task accomplished	-	-	-	-
<b>PC35.</b> undertake proper setup of collection points in different villages to collect the stock from various suppliers (farmers) and coordinate with different collection points	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC36.</b> Identify supplier and make negotiations with suppliers on right prices and required quality of bio-waste and place order	-	-	-	-
<b>PC37.</b> procure bio-waste at best possible price to w.r.t quality, quantity, time and location	-	-	-	-
<b>PC38.</b> ensure payments to suppliers after assessing quantity and quality of bio-waste	-	-	-	-
<b>PC39.</b> ensure that collected and procured bio-resides are stored at appropriate place and correct manner to avoid wastage	-	-	-	-
<b>PC40.</b> manage the inventories that are procured efficiently and effectively	-	-	-	-
<b>PC41.</b> maintain appropriate temperature, humidity and controlled atmosphere during storage	-	-	-	-
<b>PC42.</b> ensure that collected bio waste/biomass are converted to manure for utilization in urban forest	-	-	-	-
<i>Coordinate with the nursery for procuring authentic saplings</i>	<b>10</b>	<b>5</b>	-	<b>10</b>
<b>PC43.</b> procure the sapling/seed from authorized source like nurseries belonging to the Forest Department or Agriculture universities/colleges	-	-	-	-
<b>PC44.</b> ensure that procured sapling is disease free and adaptable to selected site	-	-	-	-
<b>PC45.</b> select the appropriate sapling to be transplanted based on the agroclimatic condition of selected sites	-	-	-	-
<b>PC46.</b> select sapling preferably of a height of 2 feet	-	-	-	-
<b>PC47.</b> procure sapling which have sprouted out from the local available seeds	-	-	-	-
<b>PC48.</b> procure a minimum of 25-30 varieties of local native plants to attain bio-diversity	-	-	-	-
<b>PC49.</b> Select appropriate species of plant which suits best in out periphery of forest and in inner part	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC50.</b> Select appropriate plant species which suits best to the wind direction on the selected site	-	-	-	-
<b>PC51.</b> avoid getting any exotic or foreign species of plant-saplings	-	-	-	-
<b>PC52.</b> treat the planting materials/seeds (if required) with the recommended organic pesticides and fungicides in the recommended dose by appropriate methods/techniques	-	-	-	-
<b>PC53.</b> store the treated planting materials/seeds at the recommended temperature and humidity, ensuring hygienic conditions in the storage area	-	-	-	-
<b>PC54.</b> prepare a list of the available plants in the local nurseries	-	-	-	-
<b>PC55.</b> keep the procured saplings at the site preferably 2 days in advance	-	-	-	-
<i>Coordinate for availability of labour and other required resources</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC56.</b> Compute the requirement of number of labour for the making urban forest and arrange for the same	-	-	-	-
<b>PC57.</b> identify a vendor to purchase the material required for setting up the forest such as planting material, fertilizers, pesticides/ insecticides, labour, etc.	-	-	-	-
<b>PC58.</b> purchase the material in the required number/ quantity	-	-	-	-
<b>PC59.</b> store the material as per the relevant storage, health and safety requirements	-	-	-	-
<b>PC60.</b> organise the relevant tools, equipment and Personal Protective Equipment (PPE)	-	-	-	-
<b>PC61.</b> maintain the record of purchase	-	-	-	-
<b>NOS Total</b>	<b>35</b>	<b>30</b>	-	<b>35</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N6130
<b>NOS Name</b>	Prepare for making a manmade urban forest
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro-Forestry Management
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	26/05/2022
<b>Next Review Date</b>	26/05/2025
<b>NSQC Clearance Date</b>	26/05/2022

## Qualification Pack

# AGR/N6131: Follow relevant steps and process for making a manmade urban forest

## Description

This OS unit is about relevant steps and process involved in making a manmade micro forest

## Scope

The scope covers the following :

- Prepare the site for the making urban forest
- Prepare the soils for plating of sapling
- Carryout Transplanting of sapling
- Perform waste management
- Optimize resource utilization

## Elements and Performance Criteria

### *Prepare the site for the making urban forest*

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

- PC1.** ascertain selected site comply with relevant applicable government legislation, standards, policies, and procedures
- PC2.** check and ascertain the required weather and climatic conditions including the average rainfall of the area where Mini-forest is being planned and is free from limiting factors
- PC3.** coordinate with an authorised soil testing lab to determine suitability of the soil for urban forest establishment
- PC4.** create appropriate drainage channels in the field for the effective drainage of water
- PC5.** prepare soil with good porosity levels for effective root penetration of the plant
- PC6.** Check the quality of soil of the selected site and ascertain the texture whether the soil is acidic or alkaline in nature etc. and is fit for plantation or not
- PC7.** Evaluate the fertility, strength and nutritional value of the soil
- PC8.** Ensure the accessibility or availability of water as water is a key element to make and sustain a forest.
- PC9.** Keep in scheme the artificial source of water if natural source is not available nearby
- PC10.** Ascertain the decline/incline of the land with respect of water source
- PC11.** Earmark a specific area for a small water pond.

### *Prepare the soils for plating of sapling*

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

- PC12.** prepare the soil for propagation by applying the necessary treatment
- PC13.** arrange coir peat, vermiculite, compost, FYM etc. in the recommended quantity for preparing the soil as per requirement
- PC14.** create a mixture of coir peat, vermiculite and compost by adding the ingredients in the recommended ratio

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- PC15.** add worm castings/ vermicompost to the mixture as per the requirement
- PC16.** rake the soil to break any lumps and aerate it
- PC17.** Conduct erosion and sediment control activities
- PC18.** Comply with soil and water protection practices
- PC19.** Dig the upper crust or the soil up to minimum 2 feet by using manual labour or earth augur. For big piece of land, use JCM machines.
- PC20.** Mix the soil with perforators like biomass, stubble, rice-husk etc, and maintain the ratio 1/5 of the soil
- PC21.** Mix the soil with retainers keeping the ratio 1/5 of the soil.
- PC22.** Mix the soil with dry cow-dung or local biomass which should be in the ratio of 1/3 of the soil

### *Carryout Transplanting of sapling*

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

- PC23.** transplant the planting materials using the relevant machinery and tools or manually as per the case, maintaining the recommended planting density for the selected planting materials to ensure its healthy growth as per planned layout
- PC24.** Divide the Plants in four categories viz, Canopy trees, Trees, bushes, creepers and climbers
- PC25.** Carryout plantation in set of plant-group which should include 1 canopy-tree, 1 tree, 1 bush and 1 creeper.
- PC26.** Dig the pits with a minimum depth of 1.5 feet and a width of 1 feet.
- PC27.** Mix properly the mixture of soil, retainers, perforators and nutrients properly to make the soil loose that the roots of the sapling spread easily.
- PC28.** Carry out plantation in monsoon season or in other seasons by giving a natural ambience and support to the saplings.
- PC29.** Cover the planted saplings with stubble up to 5 inches which will help in retaining water and moisture as well as help in checking the growth of grass and weeds.
- PC30.** ensure that there is very less human or animal activity for minimum 6 months till the roots are well entrenched.
- PC31.** Ascertain the appropriate plant density taking in to account the total area of the site.
- PC32.** Ensure that no plant of same species should be planted next to each other.
- PC33.** Ensure that the secondary root-system of the plant is not harmed while removing the plastic-cover of the sapling
- PC34.** Maintain the ideal space among the plant of 2.5 to 3 feet and in 1 square meter plant a group of 5 plants as per the case
- PC35.** Ensure that group of plant should have the canopy tree at the centre surrounded by other four trees and plants of the group.
- PC36.** Carryout regular watering of the forests for 18 months.
- PC37.** Perform watering in winter preferably in the afternoon and in summer watered twice a day in morning and in the evening.
- PC38.** apply water and fertilizers in the recommended quantity
- PC39.** apply pesticides/ insecticides to protect the plantlets from pests/ insects and diseases
- PC40.** set up appropriate irrigation and drainage systems in the urban forest
- PC41.** guide the client on the maintenance of the urban forest
- PC42.** arrange for protection from any health and safety hazards in and around the urban forest

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- PC43.** support the plants with bamboo-sticks with cotton thread for each plant-sapling.
- PC44.** Replace the dead sapling by a new healthy and disease-free sapling
- PC45.** Perform weeding if there is grass or weed in urban forest till the plants establish their own eco-system.
- PC46.** Leave the fell leaves in urban forest so that it gets decomposed and become part of the soil.
- PC47.** use the relevant PPE during the operations

### *Perform waste management*

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

- PC48.** segregate waste into different categories
- PC49.** dispose the non-recyclable waste in an environment-friendly manner
- PC50.** recycle the recyclable waste appropriately

### *Optimize resource utilization*

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

- PC51.** optimize the usage of various material in different tasks/ activities/ processes
- PC52.** optimize the usage of water/ electricity/ energy in various tasks/ activities/ processes
- PC53.** 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.** silviculture objectives and scope and modern silvicultural tools
- KU2.** site factors - climatic, edaphic, physiographic, biotic and their interactions
- KU3.** texture and nature of forest soils
- KU4.** trees and their distinguishing features, growth and development
- KU5.** different methods of propagating plants
- KU6.** root growth- fine root/functional root production
- KU7.** maintenance requirements of plantlets before transplanting
- KU8.** various ingredients used for preparing potting soil and their recommended quantity
- KU9.** ideal soil conditions for the healthy growth of plants
- KU10.** the correct method of planting various types of plants, trees, shrubs and grass
- KU11.** relevant treatments to improve nutrient levels in the soil
- KU12.** water and temperature requirements of plants in the urban forest
- KU13.** irrigation and drainage systems in the urban forest
- KU14.** relevant tools, implements, PPE and their correct use
- KU15.** proportionality of growing a forest with the richness in biodiversity that it attracts
- KU16.** importance of weeding and effective techniques for carrying out same
- KU17.** importance of following environmental and ecological best practices to minimise the impact on the environment
- KU18.** relevant occupational and environmental hazards and appropriate ways of dealing with them
- KU19.** benefits of resource optimization

## Qualification Pack

- KU20.** ways of efficiently managing various materials used in the urban forest
- KU21.** Direct and indirect benefits- biophysical interactions
- KU22.** Carbon sequestration potential of forests
- KU23.** weather and climatic conditions required for making urban forest
- KU24.** how to carry out soil testing
- KU25.** soil physical and chemical properties
- KU26.** evaluation of the fertility, strength and nutritional value of the soil
- KU27.** land reclamation
- KU28.** drainage channels
- KU29.** organic manures and their recommended dose
- KU30.** method of transplanting of sapling
- KU31.** pesticides/fertilizer requirements and their dose
- KU32.** use of the relevant PPE during the operations

## Generic Skills (GS)

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

- GS1.** write work-related notes
- GS2.** read the relevant guides and manuals
- GS3.** communicate clearly and politely
- GS4.** listen attentively to understand the information/ instructions being given
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** take quick decisions to deal with workplace emergencies/ accidents
- GS7.** identify possible disruptions to work and take preventive measures
- GS8.** co-ordinate with 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 the site for the making urban forest</i>	<b>6</b>	<b>8</b>	-	<b>8</b>
<b>PC1.</b> ascertain selected site comply with relevant applicable government legislation, standards, policies, and procedures	-	-	-	-
<b>PC2.</b> check and ascertain the required weather and climatic conditions including the average rainfall of the area where Mini-forest is being planned and is free from limiting factors	-	-	-	-
<b>PC3.</b> coordinate with an authorised soil testing lab to determine suitability of the soil for urban forest establishment	-	-	-	-
<b>PC4.</b> create appropriate drainage channels in the field for the effective drainage of water	-	-	-	-
<b>PC5.</b> prepare soil with good porosity levels for effective root penetration of the plant	-	-	-	-
<b>PC6.</b> Check the quality of soil of the selected site and ascertain the texture whether the soil is acidic or alkaline in nature etc. and is fit for plantation or not	-	-	-	-
<b>PC7.</b> Evaluate the fertility, strength and nutritional value of the soil	-	-	-	-
<b>PC8.</b> Ensure the accessibility or availability of water as water is a key element to make and sustain a forest.	-	-	-	-
<b>PC9.</b> Keep in scheme the artificial source of water if natural source is not available nearby	-	-	-	-
<b>PC10.</b> Ascertain the decline/incline of the land with respect of water source	-	-	-	-
<b>PC11.</b> Earmark a specific area for a small water pond.	-	-	-	-
<i>Prepare the soils for plating of sapling</i>	<b>6</b>	<b>8</b>	-	<b>8</b>

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> prepare the soil for propagation by applying the necessary treatment	-	-	-	-
<b>PC13.</b> arrange coir peat, vermiculite, compost, FYM etc. in the recommended quantity for preparing the soil as per requirement	-	-	-	-
<b>PC14.</b> create a mixture of coir peat, vermiculite and compost by adding the ingredients in the recommended ratio	-	-	-	-
<b>PC15.</b> add worm castings/ vermicompost to the mixture as per the requirement	-	-	-	-
<b>PC16.</b> rake the soil to break any lumps and aerate it	-	-	-	-
<b>PC17.</b> Conduct erosion and sediment control activities	-	-	-	-
<b>PC18.</b> Comply with soil and water protection practices	-	-	-	-
<b>PC19.</b> Dig the upper crust or the soil up to minimum 2 feet by using manual labour or earth augur. For big piece of land, use JCM machines.	-	-	-	-
<b>PC20.</b> Mix the soil with perforators like biomass, stubble, rice-husk etc, and maintain the ratio 1/5 of the soil	-	-	-	-
<b>PC21.</b> Mix the soil with retainers keeping the ratio 1/5 of the soil.	-	-	-	-
<b>PC22.</b> Mix the soil with dry cow-dung or local biomass which should be in the ratio of 1/3 of the soil	-	-	-	-
<i>Carryout Transplanting of sapling</i>	<b>8</b>	<b>8</b>	-	<b>8</b>
<b>PC23.</b> transplant the planning materials using the relevant machinery and tools or manually as per the case, maintaining the recommended planting density for the selected planting materials to ensure its healthy growth as per planned layout	-	-	-	-
<b>PC24.</b> Divide the Plants in four categories viz, Canopy trees, Trees, bushes, creepers and climbers	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC25.</b> Carryout plantation in set of plant-group which should include 1 canopy-tree, 1 tree, 1 bush and 1 creeper.	-	-	-	-
<b>PC26.</b> Dig the pits with a minimum depth of 1.5 feet and a width of 1 feet.	-	-	-	-
<b>PC27.</b> Mix properly the mixture of soil, retainers, perforators and nutrients properly to make the soil loose that the roots of the sapling spread easily.	-	-	-	-
<b>PC28.</b> Carry out plantation in monsoon season or in other seasons by giving a natural ambience and support to the saplings.	-	-	-	-
<b>PC29.</b> Cover the planted saplings with stubble up to 5 inches which will help in retaining water and moisture as well as help in checking the growth of grass and weeds.	-	-	-	-
<b>PC30.</b> ensure that there is very less human or animal activity for minimum 6 months till the roots are well entrenched.	-	-	-	-
<b>PC31.</b> Ascertain the appropriate plant density taking in to account the total area of the site.	-	-	-	-
<b>PC32.</b> Ensure that no plant of same species should be planted next to each other.	-	-	-	-
<b>PC33.</b> Ensure that the secondary root-system of the plant is not harmed while removing the plastic-cover of the sapling	-	-	-	-
<b>PC34.</b> Maintain the ideal space among the plant of 2.5 to 3 feet and in 1 square meter plant a group of 5 plants as per the case	-	-	-	-
<b>PC35.</b> Ensure that group of plant should have the canopy tree at the centre surrounded by other four trees and plants of the group.	-	-	-	-
<b>PC36.</b> Carryout regular watering of the forests for 18 months.	-	-	-	-
<b>PC37.</b> Perform watering in winter preferably in the afternoon and in summer watre twice a day in morning and in the evening.	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC38.</b> apply water and fertilizers in the recommended quantity	-	-	-	-
<b>PC39.</b> apply pesticides/ insecticides to protect the plantlets from pests/ insects and diseases	-	-	-	-
<b>PC40.</b> set up appropriate irrigation and drainage systems in the urban forest	-	-	-	-
<b>PC41.</b> guide the client on the maintenance of the urban forest	-	-	-	-
<b>PC42.</b> arrange for protection from any health and safety hazards in and around the urban forest	-	-	-	-
<b>PC43.</b> support the plants with bamboo-sticks with cotton thread for each plant-sapling.	-	-	-	-
<b>PC44.</b> Replace the dead sapling by a new healthy and disease-free sapling	-	-	-	-
<b>PC45.</b> Perform weeding if there is grass or weed in urban forest till the plants establish their own eco-system.	-	-	-	-
<b>PC46.</b> Leave the fell leaves in urban forest so that it gets decomposed and become part of the soil.	-	-	-	-
<b>PC47.</b> use the relevant PPE during the operations	-	-	-	-
<i>Perform waste management</i>	<b>2</b>	<b>2</b>	-	<b>2</b>
<b>PC48.</b> segregate waste into different categories	-	-	-	-
<b>PC49.</b> dispose the non-recyclable waste in an environment-friendly manner	-	-	-	-
<b>PC50.</b> recycle the recyclable waste appropriately	-	-	-	-
<i>Optimize resource utilization</i>	<b>2</b>	<b>2</b>	-	<b>2</b>
<b>PC51.</b> optimize the usage of various material in different tasks/ activities/ processes	-	-	-	-
<b>PC52.</b> optimize the usage of water/ electricity/ energy in various tasks/ activities/ processes	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC53.</b> connect electrical tools and equipment safely and turn off when not in use	-	-	-	-
<b>NOS Total</b>	<b>24</b>	<b>28</b>	-	<b>28</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N6131
<b>NOS Name</b>	Follow relevant steps and process for making a manmade urban forest
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro-Forestry Management
<b>NSQF Level</b>	4
<b>Credits</b>	3
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	26/05/2022
<b>Next Review Date</b>	15/08/2023
<b>NSQF Clearance Date</b>	15/02/2023

## Qualification Pack

### AGR/N6132: Maintain the urban forest to make it self sustaining

#### Description

This OS unit is about various steps involved in maintenance of urban forest till it becomes a natural self-sustaining eco-system

#### Scope

The scope covers the following :

- Prepare for maintaining the urban forest
- Maintain the plants, trees and shrubs in the urban forest
- Make the urban forest self-sustaining
- Maintain the Micro forest tools and equipment

#### Elements and Performance Criteria

##### *Prepare for maintaining the urban forest*

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

- PC1.** visit the mini-forest once in 15 days for minimum 1 year as it takes minimum 18 months for a forest to be self-sufficient.
- PC2.** monitor the forest twice in 1 month to check the growth of the saplings.
- PC3.** Observe and measure the general well-being and health of the forest and its growth on various parameters
- PC4.** Count the number of saplings that have survived, and record the data
- PC5.** Prepare the record of observations for carrying maintenance

##### *Maintain the plants, trees and shrubs in the urban forest*

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

- PC6.** water the urban plants/ trees/ shrubs with the recommended quantity of water and ensure that the water reaches all the nook and corner of the forest
- PC7.** Water the forest with hose pipe once a day in summer and during winters water the forest each alternate day.
- PC8.** maintain the prescribed level of moisture and soil temperature
- PC9.** drain out excess water from the urban forest appropriately
- PC10.** apply the recommended quantity of fertilizers and manure to the plants/ trees/ shrubs
- PC11.** Avoid carryout pruning of the plants
- PC12.** Perform pruning only if any plants has overshadowed and has a wild-growth only during the first 2 years.
- PC13.** examine the plants/ trees/ shrubs regularly for pest infestation
- PC14.** apply the approved pesticides/ insecticides as per the manufacturer's instructions
- PC15.** rake the urban forest to remove dead leaves and debris
- PC16.** remove the weeds and wilted plants/ tree/ shrubs as per the Standard Operating Procedure (SOP)

## Qualification Pack

- PC17.** carry out plant rotation and shifting for the healthy growth of plants/ trees/ shrubs
- PC18.** carryout weeding of the forest for the first 18 months
- PC19.** spray natural fermented liquid like Jeevan Amrit twice a month if the forest is not growing in a proper way due to lack of nutrients
- PC20.** apply nature based fertilisers like neem-turmeric paste if there is issue of termite
- PC21.** maintain the record of fertilizers, pesticides and insecticides used in the urban forest
- PC22.** co-ordinate with an expert for any complex issues and maintenance activities required in urban forest
- PC23.** observe the growth of the forest like the height of the plants, colour of the leafs and increasing activities of the microorganism
- PC24.** check if the forest becomes a self-sustained eco-system in 18 months when all the plants are well developed and grown.
- PC25.** Do not remove any item of the forests like fruits, leaves, wood or soil from the forest.
- PC26.** Replace If any sapling is dead, immediately with disease free sapling
- PC27.** Replace the supporting bamboo-stick if missing as sticks are good for a good straight posture of a tree and an overall shape and growth of the forest.
- PC28.** Ensure that the plants stay straight, are not buried under the mulch, and are only loosely tied to the support stick.
- PC29.** Keep the forest off from any inorganic waste like plastic, paper, chemical or metal.
- PC30.** Ensure that there is a proper drainage system so that water does not get accumulated anywhere in the forest.
- PC31.** Check the slope and ensure that excess water is out instead of being accumulated particularly during the rainy season when the water stagnates due to excess rains.
- PC32.** Check the mortality rate of plant only after 3-4 months of planting.
- PC33.** Avoid using any chemicals like pesticides, weed-killer or inorganic fertilisers.
- PC34.** Maintain mulching for at least one year and the soil should be re-mulched with time, since dry soil is detrimental to forest health.
- PC35.** Use only natural, organic and bio-degradable mulch like stubbles, leaf-residue etc.
- PC36.** Avoid removing organic matter like fallen leaves, twigs, moss from the forest floor, as it will kill good soil microbes.
- PC37.** Ensure support sticks are in accordance with plant growth
- PC38.** Avoid cutting or pruning the forest as it could make the forest weaker.
- PC39.** add natural fertilisers and bio-enzymes like Panchgavya, Jeevanamrit etc. if soil is lacking the fertility
- PC40.** spray organic pesticides if plants are eaten-up by termites or parasites
- PC41.** Keep-away stray animals for at least 18 months till the forest attain a good height.

### *Make the urban forest self-sustaining*

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

- PC42.** carryout survey of the forest resources
- PC43.** arrange for administrative setting for forest resource management
- PC44.** adopt appropriate methods of cutting viz clear cutting, selective cutting and shelter wood cutting
- PC45.** maintain appropriate time gap between cutting for the re-growth of trees

## Qualification Pack

- PC46.** make appropriate arrangements to control over forest fire
- PC47.** carryout reforestation and afforestation on the denuded area as per the case to maintain eco-balance
- PC48.** select the trees according to local geographical conditions for afforestation and take care during initial growth of the trees.
- PC49.** arrange for proper fencing to protect the urban forest from unorganised grazing
- PC50.** protect the forest either by use of recommended pesticides spray, antibiotics or planting of disease resistant strains of trees to prevent diseases resulting from parasitic fungi, rusts, mistletoes, viruses and nematodes
- PC51.** prepare master plans, both for long-term and short-term period
- PC52.** maintain the cleanliness of mico forest

### *Maintain the urban forest tools and equipment*

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

- PC53.** examine various urban forest hand/ power tools and equipment for any wear and tear or damage
- PC54.** carry out minor repair and maintenance of the tools and equipment
- PC55.** store the tools and equipment as per the manufacturer's instructions

## 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.** principles of forest management and Sustainable forest management-criteria and indicators
- KU4.** Modern tools in forest management
- KU5.** Basics of Forest Mensuration
- KU6.** use of different types of hand/ power tools and equipment used in microforest operations
- KU7.** how to carry out minor repair and maintenance of the microforest tools and equipment
- KU8.** storage requirements of the relevant tools and equipment
- KU9.** indicators of pest and disease infestation on plants/ trees/ shrubs
- KU10.** safe use of the recommended pesticides, insecticides and fertilizers
- KU11.** how to prune and train different types of plants/ trees/ shrubs
- KU12.** different types of weeds and the process of their removal
- KU13.** how to maintain optimum moisture and temperature in the microforest
- KU14.** the practice of plant rotation and shifting
- KU15.** different techniques to enhance microforest aesthetics
- KU16.** importance and appropriate ways of draining out water from an microforest
- KU17.** different methods of recycling and disposing waste
- KU18.** common sources of pollution and ways to minimise it
- KU19.** purpose of urban forest management

## Qualification Pack

### Generic Skills (GS)

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

- GS1.** write work-related notes
- GS2.** read the relevant guides and manuals
- GS3.** communicate clearly and politely
- GS4.** listen attentively to understand the information/ instructions being given
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** take quick decisions to deal with workplace emergencies/ accidents
- GS7.** identify possible disruptions to work and take preventive measures
- GS8.** co-ordinate with 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 maintaining the urban forest</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC1.</b> visit the mini-forest once in 15 days for minimum 1 year as it takes minimum 18 months for a forest to be self-sufficient.	-	-	-	-
<b>PC2.</b> monitor the forest twice in 1 month to check the growth of the saplings.	-	-	-	-
<b>PC3.</b> Observe and measure the general well-being and health of the forest and its growth on various parameters	-	-	-	-
<b>PC4.</b> Count the number of saplings that have survived, and record the data	-	-	-	-
<b>PC5.</b> Prepare the record of observations for carrying maintenance	-	-	-	-
<i>Maintain the plants, trees and shrubs in the urban forest</i>	<b>5</b>	<b>8</b>	-	<b>5</b>
<b>PC6.</b> water the urban plants/ trees/ shrubs with the recommended quantity of water and ensure that the water reaches all the nook and corner of the forest	-	-	-	-
<b>PC7.</b> Water the forest with hose pipe once a day in summer and during winters water the forest each alternate day.	-	-	-	-
<b>PC8.</b> maintain the prescribed level of moisture and soil temperature	-	-	-	-
<b>PC9.</b> drain out excess water from the urban forest appropriately	-	-	-	-
<b>PC10.</b> apply the recommended quantity of fertilizers and manure to the plants/ trees/ shrubs	-	-	-	-
<b>PC11.</b> Avoid carryout pruning of the plants	-	-	-	-
<b>PC12.</b> Perform pruning only if any plants has overshadowed and has a wild-growth only during the first 2 years.	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> examine the plants/ trees/ shrubs regularly for pest infestation	-	-	-	-
<b>PC14.</b> apply the approved pesticides/ insecticides as per the manufacturer's instructions	-	-	-	-
<b>PC15.</b> rake the urban forest to remove dead leaves and debris	-	-	-	-
<b>PC16.</b> remove the weeds and wilted plants/ tree/ shrubs as per the Standard Operating Procedure (SOP)	-	-	-	-
<b>PC17.</b> carry out plant rotation and shifting for the healthy growth of plants/ trees/ shrubs	-	-	-	-
<b>PC18.</b> carryout weeding of the forest for the first 18 months	-	-	-	-
<b>PC19.</b> spray natural fermented liquid like Jeevan Amrit twice a month if the forest is not growing in a proper way due to lack of nutrients	-	-	-	-
<b>PC20.</b> apply nature based fertilisers like neem-turmeric paste if there is issue of termite	-	-	-	-
<b>PC21.</b> maintain the record of fertilizers, pesticides and insecticides used in the urban forest	-	-	-	-
<b>PC22.</b> co-ordinate with an expert for any complex issues and maintenance activities required in urban forest	-	-	-	-
<b>PC23.</b> observe the growth of the forest like the height of the plants, colour of the leafs and increasing activities of the microorganism	-	-	-	-
<b>PC24.</b> check if the forest becomes a self-sustained eco-system in 18 months when all the plants are well developed and grown.	-	-	-	-
<b>PC25.</b> Do not remove any item of the forests like fruits, leafs, wood or soil from the forest.	-	-	-	-
<b>PC26.</b> Replace If any sapling is dead, immediately with disease free sapling	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC27.</b> Replace the supporting bamboo-stick if missing as sticks are good for a good straight posture of a tree and an overall shape and growth of the forest.	-	-	-	-
<b>PC28.</b> Ensure that the plants stay straight, are not buried under the mulch, and are only loosely tied to the support stick.	-	-	-	-
<b>PC29.</b> Keep the forest off from any inorganic waste like plastic, paper, chemical or metal.	-	-	-	-
<b>PC30.</b> Ensure that there is a proper drainage system so that water does not get accumulated anywhere in the forest.	-	-	-	-
<b>PC31.</b> Check the slope and ensure that excess water is out instead of being accumulated particularly during the rainy season when the water stagnates due to excess rains.	-	-	-	-
<b>PC32.</b> Check the mortality rate of plant only after 3-4 months of planting.	-	-	-	-
<b>PC33.</b> Avoid using any chemicals like pesticides, weed-killer or inorganic fertilisers.	-	-	-	-
<b>PC34.</b> Maintain mulching for at least one year and the soil should be re-mulched with time, since dry soil is detrimental to forest health.	-	-	-	-
<b>PC35.</b> Use only natural, organic and bio-degradable mulch like stubbles, leaf-residue etc.	-	-	-	-
<b>PC36.</b> Avoid removing organic matter like fallen leaves, twigs, moss from the forest floor, as it will kill good soil microbes.	-	-	-	-
<b>PC37.</b> Ensure support sticks are in accordance with plant growth	-	-	-	-
<b>PC38.</b> Avoid cutting or pruning the forest as it could make the forest weaker.	-	-	-	-
<b>PC39.</b> add natural fertilisers and bio-enzymes like Panchgavya, Jeevanamrit etc. if soil is lacking the fertility	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC40.</b> spray organic pesticides if plants are eaten-up by termites or parasites	-	-	-	-
<b>PC41.</b> Keep-away stray animals for at least 18 months till the forest attain a good height.	-	-	-	-
<i>Make the urban forest self-sustaining</i>	<b>5</b>	<b>7</b>	-	<b>5</b>
<b>PC42.</b> carryout survey of the forest resources	-	-	-	-
<b>PC43.</b> arrange for administrative setting for forest resource management	-	-	-	-
<b>PC44.</b> adopt appropriate methods of cutting viz clear cutting, selective cutting and shelter wood cutting	-	-	-	-
<b>PC45.</b> maintain appropriate time gap between cutting for the re-growth of trees	-	-	-	-
<b>PC46.</b> make appropriate arrangements to control over forest fire	-	-	-	-
<b>PC47.</b> carryout reforestation and afforestation on the denuded area as per the case to maintain eco-balance	-	-	-	-
<b>PC48.</b> select the trees according to local geographical conditions for afforestation and take care during initial growth of the trees.	-	-	-	-
<b>PC49.</b> arrange for proper fencing to protect the urban forest from unorganised grazing	-	-	-	-
<b>PC50.</b> protect the forest either by use of recommended pesticides spray, antibiotics or planting of disease resistant strains of trees to prevent diseases resulting from parasitic fungi, rusts, mistletoes, viruses and nematodes	-	-	-	-
<b>PC51.</b> prepare master plans, both for long-term and short-term period	-	-	-	-
<b>PC52.</b> maintain the cleanliness of mico forest	-	-	-	-
<i>Maintain the urban forest tools and equipment</i>	<b>2</b>	<b>4</b>	-	<b>4</b>

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC53.</b> examine various urban forest hand/ power tools and equipment for any wear and tear or damage	-	-	-	-
<b>PC54.</b> carry out minor repair and maintenance of the tools and equipment	-	-	-	-
<b>PC55.</b> store the tools and equipment as per the manufacturer's instructions	-	-	-	-
<b>NOS Total</b>	<b>17</b>	<b>24</b>	-	<b>19</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N6132
<b>NOS Name</b>	Maintain the urban forest to make it self sustaining
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro-Forestry Management
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	26/05/2022
<b>Next Review Date</b>	15/08/2023
<b>NSQC Clearance Date</b>	15/02/2023

## Qualification Pack

### AGR/N6133: Prepare natural manure and nutrients

#### Description

This OS unit is preparation of natural manual and nutrients for utilization in urban forest

#### Scope

The scope covers the following :

- Prepare manure by pit composting / trench composting
- Prepare Natural cow-dung manure (Jeevamrut)

#### Elements and Performance Criteria

##### *Prepare manure by pit composting / trench composting*

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

- PC1.** select the appropriate area for digging the pit/trench
- PC2.** dig the pit/trench of appropriate size and width required for the composting keeping into consideration the amount of organic matter to be added
- PC3.** Chop the compost materials finely by appropriate tools and equipment before being thrown in the hole so that exposed area for the compost materials can be maximized
- PC4.** Add the organic materials to the compost pit
- PC5.** Use a shovel to well mix the materials together so that they decompose as evenly as possible
- PC6.** Ensure that carbon-rich materials (e.g. dried leaves) are well mixed thoroughly with nitrogen-rich materials (like vegetable scraps and fresh grass clippings)
- PC7.** Cover the hole with a board if compost pit is not full and more organic materials are required to be added
- PC8.** Cover the compost with soil when it is full to the level with the surrounding soil
- PC9.** Improve the underground compost decomposition by watering the compost area appropriately with garden hose or with suitable watering equipment
- PC10.** Harvest the compost once it has decomposed properly and use in planting area

##### *Prepare Natural cow-dung manure (Jeevamrut)*

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

- PC11.** Take recommended quantity of water in barrel and add appropriate quantity of local cow dung and cow urine in water
- PC12.** Add recommended quantity of jaggery (Gud), pulses flour and soil in the barrel
- PC13.** stir the solution well and keep it for recommended hours in the shadow
- PC14.** check for the fermentation in the solution
- PC15.** use the solution once it is ready for use

#### Knowledge and Understanding (KU)

## Qualification Pack

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.** impact of not following the health, hygiene, safety and quality standards on consumers and the business
- KU5.** use of appropriate personal protective equipment suitable to the type of work
- KU6.** Nutrients requirements in urban forest
- KU7.** advantage and disadvantages of nature-based manure
- KU8.** Method of preparation of manure by pit composting / trench composting
- KU9.** Method of preparation of Natural cow-dung manure
- KU10.** different types of organic wastes and their uses
- KU11.** importance of maintaining correct proportion of substrates in a composting unit
- KU12.** length of time allowed for decomposition of organic wastes
- KU13.** Properties of Manure and nutrients composition in natural manure
- KU14.** Manure as a Source of Crop Nutrients and Soil Amendment

## Generic Skills (GS)

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

- GS1.** write work-related notes
- GS2.** read the relevant guides and manuals
- GS3.** communicate clearly and politely
- GS4.** listen attentively to understand the information/ instructions being given
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** take quick decisions to deal with workplace emergencies/ accidents
- GS7.** identify possible disruptions to work and take preventive measures
- GS8.** co-ordinate with 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 manure by pit composting / trench composting</i>	<b>4</b>	<b>8</b>	-	<b>8</b>
<b>PC1.</b> select the appropriate area for digging the pit/trench	-	-	-	-
<b>PC2.</b> dig the pit/trench of appropriate size and width required for the composting keeping into consideration the amount of organic matter to be added	-	-	-	-
<b>PC3.</b> Chop the compost materials finely by appropriate tools and equipment before being thrown in the hole so that exposed area for the compost materials can be maximized	-	-	-	-
<b>PC4.</b> Add the organic materials to the compost pit	-	-	-	-
<b>PC5.</b> Use a shovel to well mix the materials together so that they decompose as evenly as possible	-	-	-	-
<b>PC6.</b> Ensure that carbon-rich materials (e.g. dried leaves) are well mixed thoroughly with nitrogen-rich materials (like vegetable scraps and fresh grass clippings)	-	-	-	-
<b>PC7.</b> Cover the hole with a board if compost pit is not full and more organic materials are required to be added	-	-	-	-
<b>PC8.</b> Cover the compost with soil when it is full to the level with the surrounding soil	-	-	-	-
<b>PC9.</b> Improve the underground compost decomposition by watering the compost area appropriately with garden hose or with suitable watering equipment	-	-	-	-
<b>PC10.</b> Harvest the compost once it has decomposed properly and use in planting area	-	-	-	-
<i>Prepare Natural cow-dung manure (Jeevamrut)</i>	<b>4</b>	<b>8</b>	-	<b>8</b>

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> Take recommended quantity of water in barrel and add appropriate quantity of local cow dung and cow urine in water	-	-	-	-
<b>PC12.</b> Add recommended quantity of jaggery (Gud), pulses flour and soil in the barrel	-	-	-	-
<b>PC13.</b> stir the solution well and keep it for recommended hours in the shadow	-	-	-	-
<b>PC14.</b> check for the fermentation in the solution	-	-	-	-
<b>PC15.</b> use the solution once it is ready for use	-	-	-	-
<b>NOS Total</b>	<b>8</b>	<b>16</b>	-	<b>16</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N6133
<b>NOS Name</b>	Prepare natural manure and nutrients
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro-Forestry Management
<b>NSQF Level</b>	4
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	26/05/2022
<b>Next Review Date</b>	15/08/2023
<b>NSQC Clearance Date</b>	15/02/2023

## Qualification Pack

# AGR/N6128: Prepare Checklist for making and maintain an urban forest as per plan

## Description

This OS unit is about preparation of checklist for appropriate site selection, site preparation and making and maintain an urban forest

## Scope

The scope covers the following :

- Prepare for making a checklist
- Prepare checklist for appropriate site selection
- Prepare checklist to carryout site Preparation
- Prepare checklist to make an urban forest
- Prepare checklist for maintenance post making urban forest

## Elements and Performance Criteria

### *Prepare for making a checklist*

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

- PC1.** Prepare a checklist template which organizes items in a systematic manner and provides an overview of tasks that need to be accomplished
- PC2.** Prepare a roadmap as to how the entire process of developing and establishing a urban forest would be conducted
- PC3.** Enlist all the tools, technologies, and other resources, fertilizers, pesticides etc. to be used along with their price to keep a record of the same.
- PC4.** Identify and plan the available resources
- PC5.** Ensure the planned project is 'in line' with the beliefs and the mission of the organization
- PC6.** Set up an effective communication plan
- PC7.** Enlist major components of checklist viz tasks/activities, budget, deliverables and other available resources
- PC8.** estimate the cost for planting the forest and cost for fencing and cost of human resource
- PC9.** Prepare a risk management strategy

### *Prepare checklist for appropriate site selection*

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

- PC10.** ensure that right and best site has been identified
- PC11.** Check the legal owner of the land
- PC12.** ensure relevant applicable government legislation, standards, policies, and procedures at work are complied with
- PC13.** ensure all the applicable permission for urban forest making has been taken from competent authority
- PC14.** Check that the land is legal dispute free

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- PC15.** Measure the area of the site
- PC16.** Check the shape and direction of the site
- PC17.** Check the vicinity of the site whether it is surrounded by agriculture land or have construction nearby etc.
- PC18.** ensure that surrounding neighbors do not have any issues
- PC19.** Check the use of the land for the last 10 years
- PC20.** Carryout personal visit of the selected site
- PC21.** Check whether any electricity transformer/wires under or over the site is there
- PC22.** Check whether any concrete structure is there on the site
- PC23.** Check whether any drainage pipe is undergoing on the site
- PC24.** Check whether the site is fenced
- PC25.** Check whether the site is fenced from all the sites
- PC26.** find that selected site is fenced enough to save it from grazing animals
- PC27.** Identify appropriate fencing arrangement if not available
- PC28.** Check the physical and chemical properties of soil
- PC29.** Check whether land has any pebbles or industrial waste or chemicals waste or a dump-yard
- PC30.** Check the availability of water on site
- PC31.** Identify appropriate water arrangement if not available for minimum 8-10 Months
- PC32.** Check the availability of dry cow-dung and their source
- PC33.** Check the availability of other local biomass and their sources
- PC34.** Check the availability of required quantity stubble for using as mulching
- PC35.** check if the selected land is personal and client would prefer more fruit tree
- PC36.** check If there any already existing tree/trees
- PC37.** check if there is any wild growth of shrubs on the site

### *Prepare checklist for site preparation*

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

- PC38.** Remove all the wild growth without removing the trees.
- PC39.** Dig the land with excavator up to 2 feet and loosen the soil.
- PC40.** Add 1/3 of dry cow-dung or bio-mass.
- PC41.** Add local biomass in the form of retainers/perforators.
- PC42.** Spread the dug soil but let it loose so as roots can easily penetrate

### *Prepare checklist to make an urban forest*

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

- PC43.** Procure plants preferably from Forests-nursery.
- PC44.** Make a list of all local flora
- PC45.** Group the plants in a set of 5 Canopy, small-tree, climbers, creepers and shrubs
- PC46.** Ensure that roots are not damaged while removing the plastic-cover.
- PC47.** Get the supporting stick, cotton-thread and scissor.
- PC48.** Decide a date and time for plantation
- PC49.** Dig the holes with the help of earth-augur on manually

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- PC50.** Water the holes/pits a day before.
- PC51.** Plant the big tree in the centre surrounded by small trees and shrubs
- PC52.** Plant the saplings in the above way.
- PC53.** Water the newly created forests
- PC54.** Add mulch over the soil
- PC55.** Ensure that watering is done once in day in summer and once in 2 days in winter
- PC56.** De-weed after 30 days if weed crops up
- PC57.** ensure that any leaf or twig from the forest is not removed
- PC58.** identify dying sapling and give the required organic nutrients
- PC59.** Replace the dead plant with new plant immediately.
- PC60.** Spray organic pesticides in case of termite.
- PC61.** Minimize human interference in the forest.
- PC62.** identify and remove the plastic waste
- PC63.** Ensure that forest grow as natural as possible

### *Prepare checklist for maintenance post making urban forest*

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

- PC64.** Ensure that fencing remains intact and if get broken by any means it is repaired immediately
- PC65.** Ensure that watering of forest is done optimally on regular interval and all area of the forest get watered
- PC66.** Ensure that mulching is done by covering the roots of each sapling. If possible mulch the whole forest with any available local biomass
- PC67.** Ensure that no random person or wild animal enters the forest

## 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.** importance of effective planning and execution of the roadmap so prepared
- KU5.** Prioritizing tasks from the checklist as per their requirement resulting in efficient management.
- KU6.** basics concepts of making an urban forest
- KU7.** Importance of co-ordination and sound communication for accurately conveying the deliverables
- KU8.** Pre-requisites for site selection for urban forest
- KU9.** How to develop layout for urban forest
- KU10.** How to make urban forest and maintain and sustain it properly
- KU11.** how to maintain the urban forest to make it self sustaining
- KU12.** Natural manure and nutrients used in urban forest
- KU13.** steps and process for making a manmade urban forest

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- KU14.** risk management strategy in urban forest
- KU15.** psychological, sociological, aesthetic economic, and environmental benefits of urban forest
- KU16.** Importance of Proper Tree Selection
- KU17.** tree species recommended for limited use for making urban forest
- KU18.** permission required from competent authority for making urban forest
- KU19.** urban forest benefits
- KU20.** purpose of urban forest management
- KU21.** practices and methods for protecting and enhancing urban forest in a sustainable manner

## Generic Skills (GS)

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

- GS1.** write work-related notes
- GS2.** read the relevant guides and manuals
- GS3.** communicate clearly and politely
- GS4.** listen attentively to understand the information/ instructions being given
- GS5.** plan and prioritise tasks to ensure timely completion
- GS6.** take quick decisions to deal with workplace emergencies/ accidents
- GS7.** identify possible disruptions to work and take preventive measures
- GS8.** co-ordinate with 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 making a checklist</i>	<b>5</b>	<b>2</b>	-	<b>5</b>
<b>PC1.</b> Prepare a checklist template which organizes items in a systematic manner and provides an overview of tasks that need to be accomplished	-	-	-	-
<b>PC2.</b> Prepare a roadmap as to how the entire process of developing and establishing a urban forest would be conducted	-	-	-	-
<b>PC3.</b> Enlist all the tools, technologies, and other resources, fertilizers, pesticides etc. to be used along with their price to keep a record of the same.	-	-	-	-
<b>PC4.</b> Identify and plan the available resources	-	-	-	-
<b>PC5.</b> Ensure the planned project is 'in line' with the beliefs and the mission of the organization	-	-	-	-
<b>PC6.</b> Set up an effective communication plan	-	-	-	-
<b>PC7.</b> Enlist major components of checklist viz tasks/activities, budget, deliverables and other available resources	-	-	-	-
<b>PC8.</b> estimate the cost for planting the forest and cost for fencing and cost of human resource	-	-	-	-
<b>PC9.</b> Prepare a risk management strategy	-	-	-	-
<i>Prepare checklist for appropriate site selection</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC10.</b> ensure that right and best site has been identified	-	-	-	-
<b>PC11.</b> Check the legal owner of the land	-	-	-	-
<b>PC12.</b> ensure relevant applicable government legislation, standards, policies, and procedures at work are complied with	-	-	-	-
<b>PC13.</b> ensure all the applicable permission for urban forest making has been taken from competent authority	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> Check that the land is legal dispute free	-	-	-	-
<b>PC15.</b> Measure the area of the site	-	-	-	-
<b>PC16.</b> Check the shape and direction of the site	-	-	-	-
<b>PC17.</b> Check the vicinity of the site whether it is surrounded by agriculture land or have construction nearby etc.	-	-	-	-
<b>PC18.</b> ensure that surrounding neighbors do not have any issues	-	-	-	-
<b>PC19.</b> Check the use of the land for the last 10 years	-	-	-	-
<b>PC20.</b> Carryout personal visit of the selected site	-	-	-	-
<b>PC21.</b> Check whether any electricity transformer/wires under or over the site is there	-	-	-	-
<b>PC22.</b> Check whether any concrete structure is there on the site	-	-	-	-
<b>PC23.</b> Check whether any drainage pipe is undergoing on the site	-	-	-	-
<b>PC24.</b> Check whether the site is fenced	-	-	-	-
<b>PC25.</b> Check whether the site is fenced from all the sites	-	-	-	-
<b>PC26.</b> find that selected site is fenced enough to save it from grazing animals	-	-	-	-
<b>PC27.</b> Identify appropriate fencing arrangement if not available	-	-	-	-
<b>PC28.</b> Check the physical and chemical properties of soil	-	-	-	-
<b>PC29.</b> Check whether land has any pebbles or industrial waste or chemicals waste or a dump-yard	-	-	-	-
<b>PC30.</b> Check the availability of water on site	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC31.</b> Identify appropriate water arrangement if not available for minimum 8-10 Months	-	-	-	-
<b>PC32.</b> Check the availability of dry cow-dung and their source	-	-	-	-
<b>PC33.</b> Check the availability of other local biomass and their sources	-	-	-	-
<b>PC34.</b> Check the availability of required quantity stubble for using as mulching	-	-	-	-
<b>PC35.</b> check if the selected land is personal and client would prefer more fruit tree	-	-	-	-
<b>PC36.</b> check If there any already existing tree/trees	-	-	-	-
<b>PC37.</b> check if there is any wild growth of shrubs on the site	-	-	-	-
<i>Prepare checklist for site preparation</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC38.</b> Remove all the wild growth without removing the trees.	-	-	-	-
<b>PC39.</b> Dig the land with excavator up to 2 feet and loosen the soil.	-	-	-	-
<b>PC40.</b> Add 1/3 of dry cow-dung or bio-mass.	-	-	-	-
<b>PC41.</b> Add local biomass in the form of retainers/perforators.	-	-	-	-
<b>PC42.</b> Spread the dug soil but let it loose so as roots can easily penetrate	-	-	-	-
<i>Prepare checklist to make an urban forest</i>	<b>5</b>	<b>5</b>	-	<b>5</b>
<b>PC43.</b> Procure plants preferably from Forests-nursery.	-	-	-	-
<b>PC44.</b> Make a list of all local flora	-	-	-	-
<b>PC45.</b> Group the plants in a set of 5 Canopy, small-tree, climbers, creepers and shrubs	-	-	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC46.</b> Ensure that roots are not damaged while removing the plastic-cover.	-	-	-	-
<b>PC47.</b> Get the supporting stick, cotton-thread and scissor.	-	-	-	-
<b>PC48.</b> Decide a date and time for plantation	-	-	-	-
<b>PC49.</b> Dig the holes with the help of earth-auger on manually	-	-	-	-
<b>PC50.</b> Water the holes/pits a day before.	-	-	-	-
<b>PC51.</b> Plant the big tree in the centre surrounded by small trees and shrubs	-	-	-	-
<b>PC52.</b> Plant the saplings in the above way.	-	-	-	-
<b>PC53.</b> Water the newly created forests	-	-	-	-
<b>PC54.</b> Add mulch over the soil	-	-	-	-
<b>PC55.</b> Ensure that watering is done once in day in summer and once in 2 days in winter	-	-	-	-
<b>PC56.</b> De-weed after 30 days if weed crops up	-	-	-	-
<b>PC57.</b> ensure that any leaf or twig from the forest is not removed	-	-	-	-
<b>PC58.</b> identify dying sapling and give the required organic nutrients	-	-	-	-
<b>PC59.</b> Replace the dead plant with new plant immediately.	-	-	-	-
<b>PC60.</b> Spray organic pesticides in case of termite.	-	-	-	-
<b>PC61.</b> Minimize human interference in the forest.	-	-	-	-
<b>PC62.</b> identify and remove the plastic waste	-	-	-	-
<b>PC63.</b> Ensure that forest grow as natural as possible	-	-	-	-
<i>Prepare checklist for maintenance post making urban forest</i>	<b>5</b>	<b>3</b>	-	<b>5</b>

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC64.</b> Ensure that fencing remains intact and if get broken by any means it is repaired immediately	-	-	-	-
<b>PC65.</b> Ensure that watering of forest is done optimally on regular interval and all area of the forest get watered	-	-	-	-
<b>PC66.</b> Ensure that mulching is done by covering the roots of each sapling. If possible mulch the whole forest with any available local biomass	-	-	-	-
<b>PC67.</b> Ensure that no random person or wild animal enters the forest	-	-	-	-
<b>NOS Total</b>	<b>25</b>	<b>20</b>	<b>-</b>	<b>25</b>

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	AGR/N6128
<b>NOS Name</b>	Prepare Checklist for making and maintain an urban forest as per plan
<b>Sector</b>	Agriculture
<b>Sub-Sector</b>	Forestry, Environment and Renewable Energy Management
<b>Occupation</b>	Agro-Forestry Management
<b>NSQF Level</b>	4
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	26/05/2022
<b>Next Review Date</b>	26/05/2025
<b>NSQC Clearance Date</b>	26/05/2022

## 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>	1
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	26/05/2022
<b>Next Review Date</b>	27/05/2024
<b>NSQC Clearance Date</b>	27/05/2021

## 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:

## Qualification Pack

- 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>	<b>1</b>	<b>1</b>	-	-
<b>PC1.</b> identify employability skills required for jobs in various industries	-	-	-	-
<b>PC2.</b> identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values - Citizenship</i>	<b>1</b>	<b>1</b>	-	-
<b>PC3.</b> 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.	-	-	-	-
<b>PC4.</b> follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	<b>2</b>	<b>4</b>	-	-
<b>PC5.</b> recognize the significance of 21st Century Skills for employment	-	-	-	-
<b>PC6.</b> 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>	<b>2</b>	<b>3</b>	-	-
<b>PC7.</b> use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
<b>PC8.</b> read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
<b>PC9.</b> write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development &amp; Goal Setting</i>	<b>1</b>	<b>2</b>	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> understand the difference between job and career	-	-	-	-
<b>PC11.</b> prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	<b>2</b>	<b>2</b>	-	-
<b>PC12.</b> follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
<b>PC13.</b> work collaboratively with others in a team	-	-	-	-
<i>Diversity &amp; Inclusion</i>	<b>1</b>	<b>2</b>	-	-
<b>PC14.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC15.</b> escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	<b>2</b>	<b>3</b>	-	-
<b>PC16.</b> select financial institutions, products and services as per requirement	-	-	-	-
<b>PC17.</b> carry out offline and online financial transactions, safely and securely	-	-	-	-
<b>PC18.</b> identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
<b>PC19.</b> identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	<b>3</b>	<b>4</b>	-	-
<b>PC20.</b> operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
<b>PC21.</b> use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
<b>PC22.</b> 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>	<b>2</b>	<b>3</b>	-	-
<b>PC23.</b> identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
<b>PC24.</b> develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
<b>PC25.</b> identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	<b>1</b>	<b>2</b>	-	-
<b>PC26.</b> identify different types of customers	-	-	-	-
<b>PC27.</b> identify and respond to customer requests and needs in a professional manner.	-	-	-	-
<b>PC28.</b> follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship &amp; Jobs</i>	<b>2</b>	<b>3</b>	-	-
<b>PC29.</b> create a professional Curriculum vitae (Résumé)	-	-	-	-
<b>PC30.</b> search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
<b>PC31.</b> apply to identified job openings using offline /online methods as per requirement	-	-	-	-
<b>PC32.</b> answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
<b>PC33.</b> identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0102
<b>NOS Name</b>	Employability Skills (60 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	4
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	28/02/2026
<b>NSQC Clearance Date</b>	28/02/2023

## 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/N6129.Comprehend the basics concepts of making a urban forest	20	15	0	15	50	10
AGR/N6130.Prepare for making a manmade urban forest	35	30	0	35	100	15
AGR/N6131.Follow relevant steps and process for making a manmade urban forest	24	28	0	28	80	20
AGR/N6132.Maintain the urban forest to make it self sustaining	17	24	0	19	60	15
AGR/N6133.Prepare natural manure and nutrients	8	16	0	16	40	15
AGR/N6128.Prepare Checklist for making and maintain an urban forest as per plan	25	20	0	25	70	15
AGR/N9903.Maintain health and safety at the workplace	40	25	-	35	100	5
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	0	0	50	5
<b>Total</b>	<b>189</b>	<b>188</b>	<b>-</b>	<b>173</b>	<b>550</b>	<b>100</b>

## Qualification Pack

### 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
<b>DF</b>	Dense Forest
<b>PA</b>	Protected Areas
<b>NTFP</b>	Non Timber Forest Produce
<b>MFFCM</b>	Modern Forest fire Control Methods
<b>JFM</b>	Joint Forest Management
<b>FSI</b>	Forest Survey of India
<b>FRI</b>	Forest Research Institute
<b>FFCM</b>	Forest Fire Control & Management
<b>CS</b>	Conservation & Survey
<b>CNFA</b>	Cultivable Non-Forest Area
<b>AFM</b>	Advanced Forest Management
<b>PPE</b>	Personal Protective Equipment
<b>WII</b>	Wildlife Institute of India

## 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.