

# *Nursery and Garden Assistant*

## Short term Curriculum

(Competency Based)



Council for technical education and vocational training

Curriculum Development Division

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## **Introduction**

This competency based short term curriculum for **Nursery and Garden Assistant** is designed to produce lower level technical workforce in the field of nursery and gardening to equip with skills, knowledge and attitudes necessary for nursery and garden assistant in order to meet the demand of such workforce in the country so as to contribute in the national streamline of poverty reduction.

## **Aim**

The aim of this program is to produce skilled workforce in the field of nursery and gardening by providing training and link the trainees to employment opportunities.

## **Objectives**

After the completion of this training, the trainees will be able to:

Be familiar with floriculture and gardening

- Perform soil and plant nutrients management activities
- Make compost
- Perform nursery planning and management activities
- Perform plant protection activities
- Be familiar with various garden
- Perform garden development activities
- Maintain garden and garden plants
- Propagate Plant
- Arrange and decorate house plants
- Prepare and maintain lawn
- Market plants
- Perform communication and professionalism development activities
- Perform entrepreneurship development activities

## **Course Description**

This curriculum provides skills and knowledge necessary for nursery and garden assistant. There will be both demonstration by trainers/instructors and opportunity by trainees to carry out the skills/tasks necessary for these level of technical workforce. Trainees will practice and learn skills by using typical tools, materials and equipment necessary for this program. This curricular program includes tasks/skills and related technical knowledge necessary for nursery and gardening.

On successful completion of this training, the trainees will be able to perform soil and plant nutrients management activities, make compost, perform nursery planning and management activities, perform plant protection activities, be familiar with various garden, perform garden development activities, maintain garden and garden plants, propagate plant, arrange and decorate house plants, prepare and maintain lawn, market plants, perform communication and professionalism development activities, and perform entrepreneurship development activities.

**Duration**

390 hours

**Target Group**

The target group for this training program will be individuals interested to the occupation. Priority will be given to females, Dalits, Janajatis, conflict affected people and the differentiable.

**Group size**

Maximum 20

**Target location**

All over Nepal

**Medium of Instruction**

Nepali or English or both

**Pattern of attendance**

80% in theory classes and 90% in Practical (Performance)

**Focus of the curriculum**

This is a competency-based curriculum. This curriculum emphasizes on competent performance of the task specified in it. 80% time is allocated to the competencies and 20% to the essential related technical knowledge. So, the main focus will be on the performance of specified competencies/tasks /skills in the curriculum.

**Entry criteria**

Individuals who meet the following criteria will be allowed to enter in this curricular program:

- Literate
- Minimum of 16 years of age
- Should pass entrance examination

**Instructional Media and Materials**

The following instructional media and materials are suggested for the effective instruction and demonstration.

- Printed Media Materials (Assignment sheets, Case studies, Handouts, Information sheets, Individual training packets, Procedure sheets, Performance Check lists, Textbooks etc.).
- Non-projected Media Materials (Display, Models, Flip chart, Poster, Writing board etc.).
- Projected Media Materials (Opaque projections, Overhead transparencies, Slides etc.).
- Audio-Visual Materials (Audiotapes, Films, Slide-tape programs, Videodiscs, Videotapes etc.).

- Computer-Based Instructional Materials (Computer-based training, Interactive video etc.).

### **Teaching Learning Methodologies**

The methods of teachings for garden designing program will be a combination of several approaches such as illustrated lecture, group discussion, demonstration, simulation, guided practice, practical experiences, fieldwork and other independent learning.

Theory: lecture, discussion, assignment, group work.

Practical: demonstration, observation, guided practice, independent practice and Project work.

### **Certificate requirement**

The related training institute will provide the training certificate of “**Nursery and Garden Assistant**” to those individuals who fulfill all the requirements of this curriculum.

### **Trainers’ Qualification**

- Minimum SLC pass with at least 10 years job experience in related field or
- TSLC in agriculture (Plant Science) with at least 5 years job experience in the related field or
- Skill test level II
- At least 1 week Training of Trainers(ToT) from recognize institution
- Good communicative & instructional skills

### **Trainer – Trainees Ratio**

- 1:10 for practical classes
- Depends on the nature of subject matter and class room situation for theory classes.

### **Suggestion for instruction**

- Select objectives.
  1. Select/write objective of cognitive domain.
  2. Select/write objectives of psychomotor domain.
  3. Select/write objectives of affective domain.
- Select subject matter.
  1. Perform detail study of the subject matter.
  2. Select subject matter/content related to cognitive domain.
  3. Select subject matter/content related to psychomotor domain.
  4. Select subject matter/content related to affective domain.
- Select Instructional/teaching Method(s).
  - Identify various methods:
    1. Teacher centered methods: Lecture, demonstration, question answer, inquiry, induction & deduction methods
    2. Student initiated methods: Experimental, field trip/excursion, discovery, problem solving, exploration, and survey methods

3. Interaction methods: Discussion, group/team teaching, micro teaching, exhibition/demonstration methods.
  4. Dramatic methods: Role play and dramatization
- Select instructional/teaching Method(s) on the basis of :
    1. The objective(s) of the lesson: Objective(s) of cognitive domain, Objective(s) of psychomotor domain, Objective (s) of affective domain
    2. The nature of the subject matter/content
    3. The level of knowledge, skill and attitudes of the learners
    4. The available educational/learning materials
    5. The instructors background and experiences
  - Select appropriate educational materials and apply/use them at right time and place.
  - Make plan(s) for class room/ field work/ workshop organization & management.
  - Coordinate among objectives, subject matter/ content and instruction / teaching method(s).
  - Prepare lesson plan(s) for:
    1. Theory class / lesson
    2. Performance / practical class / work /lesson.
    3. Deliver / conduct instruction / program
  - Evaluate the trainees/students:
    1. Develop various tools of evaluation
    2. Evaluate the attainment of objectives related to cognitive, psychomotor and affective domains through the application/use of the various tools of trainee/student evaluation
  - Evaluate the instruction / program

### **Suggestion for skill training**

- **Demonstrate task performance**
  1. Demonstrate task performance in normal speed.
  2. Demonstrate slowly with verbal description of each and every steps in the sequence of activity flow of the task performance using question and answer techniques
  3. Repeat it for the clarification on trainees demand if necessary.
  4. Perform fast demonstration of the task performance.
- **Provide trainees the opportunity to practice the task performance demonstrated.**
  1. Provide trainees to have guided practice
  2. Create environment for practicing the demonstrated task performance
  3. Guide the trainees in each and every step of task performance
  4. Provide trainees the opportunity to repeat & re-repeat as per the need to be proficient on the given task performance
  5. Switch to another task demonstration if and only if the trainees developed proficiency in the given task performance

### **Other suggestions**

1. Apply principles of skill training
2. Allocate 20% time for theory and 80% time for task performance while delivering instruction /training.

3. Apply principles of adult learning.
4. Apply principles of intrinsic motivation
5. Facilitate maximum trainees' involvement in learning and task performance activities.
6. Instruct the trainees on the basis of their existing level of knowledge, skills & attitudes.

## Course Structure:

SN	Module	Time hour			Marks
		Th	Pr	Total	
1	Introduction to floriculture and gardening	6	24	30	20
2	Soil and Plant Nutrients Management	4	16	20	20
3	Compost making	2	8	10	10
4	Nursery Planning and Management	12	48	60	50
5	Plant Protection	13	52	65	50
6	Introduction to various Garden	6	24	30	20
7	Development of Gardens	3	12	15	10
8	Maintenance of Garden and Garden Plants	5	20	25	20
9	Plant Propagation	9	36	45	30
10	Arrangement and decoration of house plants	4	16	20	10
11	Preparation and Maintenance of Lawn	3	12	15	10
12	Marketing of plants	2	8	10	10
13	Communication and professionalism	1	4	5	10
14	Entrepreneurship Development	8	32	40	30
<b>Total</b>		<b>78</b>	<b>312</b>	<b>390</b>	<b>300</b>

## Module 1: Introduction to floriculture and gardening

<b>Course Description:</b> This module deals with knowledge and skills related to floriculture and gardening.					
<b>Course Objectives:</b> At the end of this course, trainees will be able to:					
<ul style="list-style-type: none"> <li>• Explain the concept of climate and geography and floriculture in Nepal</li> <li>• Classify ornamental plants and gardens.</li> <li>• Handle tools/equipment/machinery used in horticulture.</li> </ul>					
<b>Total Time : 30 hrs</b>		<b>Theory: 6</b>		<b>Practical: 24</b>	
			<b>Time hours</b>		
S.N.	Tasks/Skills/Topics	Related Technical Knowledge	Th	Pr	T
1.	Be familiar with concept of climate and geography of Nepal	<p><b><u>Climate:</u></b></p> <ul style="list-style-type: none"> <li>• Weather and elements of weather :                             <ul style="list-style-type: none"> <li>▪ Temperature</li> <li>▪ Light</li> <li>▪ Rainfall</li> <li>▪ Humidity</li> </ul> </li> <li>• Seasons</li> <li>• Climate and climatic zones                             <ul style="list-style-type: none"> <li>▪ Tropical</li> <li>▪ Sub-tropical</li> <li>▪ Temperate</li> <li>▪ Alpine and sub-alpine</li> <li>▪ Arid and semi arid</li> </ul> </li> <li>• Climatic zones of Nepal</li> </ul> <p><b><u>Geography of Nepal :</u></b></p> <ul style="list-style-type: none"> <li>• Geographical zones of Nepal</li> <li>• Geographical distribution of horticultural plants /gardens in Nepal</li> <li>• Land:                             <ul style="list-style-type: none"> <li>▪ Flat and</li> <li>▪ Sloppy</li> </ul> </li> <li>• Facing:                             <ul style="list-style-type: none"> <li>▪ East</li> <li>▪ West</li> <li>▪ South</li> <li>▪ North</li> </ul> </li> </ul>	1	2	3
2.	State concept of floriculture	<p><b><u>Floriculture:</u></b></p> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Importance with aesthetic &amp; economic values</li> <li>• Scope in Nepal</li> </ul>	1	1	2
3.	Be familiar with the	<b><u>Technical terms and general terminologies:</u></b>	1	2	3

	related technical terms and general terminologies	<ul style="list-style-type: none"> <li>Collect and define technical terms related to floriculture and gardening</li> </ul>			
4.	Identify ornamental Plants (Ops) Identification of common ornamental plants in relation to morphology and cultural practices	<p><b><u>Identification of ornamental plants:</u></b></p> <ul style="list-style-type: none"> <li>Definition</li> <li>Listing Ops with their:- <ul style="list-style-type: none"> <li>Origin</li> <li>Nepali name</li> <li>English name</li> <li>Botanical name</li> </ul> </li> <li>Morphology of typical Ops.</li> </ul>		3	3
5.	Classify ornamental plants	<p><b><u>Classification of ornamental plants:</u></b></p> <ul style="list-style-type: none"> <li>Classification system</li> <li>Classification</li> <li>Related terms</li> <li>Classify the given ornamental plants as discussed system and terms (Plants and list to be provided)</li> </ul>		3	3
6.	Classify Gardens	<p><b><u>Classification of Gardens</u></b></p> <ul style="list-style-type: none"> <li>Definition</li> <li>Types</li> <li>Characteristics</li> </ul>		1	1
7.	Carry out study of common ornamental plants with examples	<p><b><u>Introduction to the common ornamental plants-</u></b></p> <ul style="list-style-type: none"> <li>Classification by types ( Trees, Shrubs, Herbicious, Vine, Climbers etc)</li> <li>Classification by Season ( Seasonal, Annual etc)</li> <li>Classification by Climatic region (Temperate, tropical, sub tropical etc)</li> </ul>	1	1	2
8.	Handle /maintain tools/equipment / machinery used in horticulture	<p><b><u>Tools/equipment / machinery:</u></b></p> <ul style="list-style-type: none"> <li>Identification</li> <li>Name : common name, technical name</li> <li>Function/uses</li> <li>Handling techniques</li> <li>Care/maintenance</li> <li>Storage and</li> <li>Safety precautions ( List to be provided)</li> </ul>	0	3	3
9.	Acquire conceptual knowledge / understanding of the followings in brief: <ul style="list-style-type: none"> <li>Tree, shrubs, climber</li> </ul>	<p><b><u>Brief introduction to the followings:</u></b></p> <ul style="list-style-type: none"> <li>Garden in urban areas</li> <li>Types of gardens and their features</li> <li>Winter and summer gardening / sun VS</li> </ul>	2	8	10

	<p>and hedge and their role in landscaping</p> <ul style="list-style-type: none"> <li>• House plants and decoration</li> <li>• Indigenous plants for house and garden decoration</li> <li>• Use of the following in landscaping: <ul style="list-style-type: none"> <li>▪ Ground cover plants</li> <li>▪ Edge plants</li> <li>▪ Stony plants</li> <li>▪ Pond plants</li> </ul> </li> <li>• Arrangement of fresh flower</li> <li>• Pruning and training of fruit trees and uses of bordeo paste</li> <li>• Fruit trees and their care</li> <li>• Construction and maintenance of rock garden</li> <li>• Introduction to water fountain</li> <li>• Garden tools and their safe use</li> <li>• Maintaining vegetable garden</li> <li>• Topiary making</li> </ul>	<p>shade</p> <ul style="list-style-type: none"> <li>• Tree, shrubs, climber and hedge and their role in landscaping</li> <li>• House plants and decoration</li> <li>• Indigenous plants for house and garden decoration</li> <li>• Organic garden, non chemical pesticide and their importance</li> <li>• Use of the following in landscaping: <ul style="list-style-type: none"> <li>▪ Ground cover plants</li> <li>▪ Edge plants</li> <li>▪ Stony plants</li> <li>▪ Pond plants</li> </ul> </li> <li>• Arrangement of fresh flower</li> <li>• Fruit trees and their care</li> <li>• Techniques of making water fountain</li> <li>• Lay out of vegetable garden</li> <li>• Production of vegetable in the garden</li> <li>• Topiary making</li> </ul>			
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## Module 2: Soil and Plant Nutrients Management

<b>Course Description:</b> This module deals with knowledge and skills related to management of soil and plant nutrients.					
<b>Course Objectives:</b> At the end of this course, trainees will be able to:					
<ul style="list-style-type: none"> <li>• Explain soil, fertilizer and manure.</li> <li>• Collect soil sample</li> <li>• Apply principles of IPNS</li> <li>• Improve soil</li> </ul>					
<b>Total Time : 20 hrs</b>		<b>Theory: 4</b>		<b>Practical:16</b>	
				<b>Time hours</b>	
<b>S.N.</b>			<b>Th</b>	<b>Pr</b>	<b>T</b>
1.	Develop concept of soil	<b><u>soil:</u></b> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Soil structure</li> <li>• Soil texture</li> <li>• Soil profile</li> <li>• Soil color</li> <li>• Soil P<sub>H</sub></li> <li>• Soil components- water, air, microbes, and minerals</li> <li>• Living organisms in soil- soil microbes and earthworm and their role in soil fertility improvement</li> <li>• Importance of soil in floriculture and gardening</li> </ul>	<b>1</b>	<b>1</b>	<b>2</b>
2.	Develop concept of soil fertility	<b><u>Soil fertility:</u></b> <ul style="list-style-type: none"> <li>• concept and definition of soil fertility</li> <li>• Importance of soil fertility in floriculture and gardening</li> <li>• Factors affecting soil fertility</li> <li>• Plant Nutrients, their functions and deficiency symptoms in floriculture and gardening. <ul style="list-style-type: none"> <li>▪ Major</li> <li>▪ Minor</li> <li>▪ Trace elements</li> </ul> </li> </ul>	<b>1</b>	<b>1</b>	<b>2</b>
3.	Develop concept of fertilizer / manure	<b><u>Fertilizer / manure:</u></b> <ul style="list-style-type: none"> <li>• Concept and definition of fertilizer and manure</li> <li>• Identification of different fertilizer</li> <li>• Importance of fertilizer and manure in floriculture and gardening</li> <li>• Types of fertilizer : <ul style="list-style-type: none"> <li>▪ Chemical fertilizer</li> </ul> </li> </ul>	<b>1</b>	<b>1</b>	<b>2</b>

		<ul style="list-style-type: none"> <li>▪ Types</li> <li>▪ Advantages and disadvantages</li> <li>▪ Common name available in the market</li> <li>▪ Nutrients percentage</li> <li>▪ Use and methods of use</li> <li>▪ Dose calculations</li> <li>▪ Precautions</li> <li>• Organic fertilizers- FYM and compost</li> <li>• Types</li> <li>• Advantages and disadvantages</li> <li>• Nutrients percentage</li> <li>• Use and methods of use</li> <li>• Precautions</li> </ul>			
4.	Identify soil types	<p><b><u>Soil types:</u></b></p> <ul style="list-style-type: none"> <li>• Concept of soil types- classification</li> <li>• Types of soil in Nepal</li> <li>• Characters of different types of soil</li> </ul>	<b>1</b>	<b>1</b>	<b>2</b>
5.	Collect soil sample	<p><b><u>Soil Sampling :</u></b></p> <ul style="list-style-type: none"> <li>• Definition/concept</li> <li>• Purpose and importance</li> <li>• Site selection and sampling lay out</li> <li>• Materials required</li> <li>• Methods/steps/process</li> <li>• Post sampling activities</li> <li>• Precautions</li> </ul>		<b>3</b>	<b>3</b>
6.	Be familiar with acidic and Alkaline nature of soil	<p><b><u>Soil PH :</u></b></p> <ul style="list-style-type: none"> <li>• Definition/concept</li> <li>• PH recommended for garden plants</li> <li>• Cause</li> <li>• Effect on crop</li> <li>• Methods of testing</li> <li>• Precautions</li> </ul>		<b>3</b>	<b>3</b>
7.	Apply principles of IPNS	<p><b><u>Integrated plant nutrient system ( IPNS ):</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Need / importance</li> <li>• Why, when, where, and how to establish and maintain IPNS</li> <li>• Precautions to be followed</li> </ul>	<b>1</b>	<b>2</b>	<b>3</b>
8.	Improve soil	<p><b><u>Soil improvement:</u></b></p> <ul style="list-style-type: none"> <li>• Methods of improving soil</li> <li>• Treatment of the deficiency of nutrients</li> <li>• Mixing of different types of soil and organic matter</li> </ul>		<b>2</b>	<b>2</b>

		<ul style="list-style-type: none"> <li>• Precautions to be followed</li> <li>• Role of organic matter, Irrigation and drainage in soil improvement</li> </ul>			
9.	Prepare modified soil	<p><b><u>Modified soil:</u></b></p> <ul style="list-style-type: none"> <li>• Concept and definition of modified soil</li> <li>• Importance and uses</li> <li>• Technique of preparing modified soil-</li> <li>• Safety precautions to be followed</li> </ul>		<b>2</b>	<b>2</b>

## Module 3: Compost making

<b>Course Description:</b> This module deals with knowledge and skills related to compost making.					
<b>Course Objectives:</b> At the end of this course, trainees will be able to:					
<ul style="list-style-type: none"> <li>• Prepare compost manure.</li> <li>• Make vermi-compost</li> <li>• Apply compost in garden.</li> </ul>					
<b>Total Time : 10 hrs</b>		<b>Theory: 2</b>		<b>Practical:8</b>	
S.N.	Tasks	Related Technical Knowledge	T	P	T
1.	Prepare compost manure	<b><u>Compost and compost making:</u></b> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Importance</li> <li>• Characteristics</li> <li>• Required materials</li> <li>• Methods</li> <li>• Decomposition process</li> <li>• Precautions</li> <li>• Types</li> </ul>		<b>2</b>	<b>2</b>
2.	Make compost by heap method	<b><u>Heap method:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Advantages</li> <li>• Materials</li> <li>• Process and steps</li> <li>• Characteristics</li> <li>• Precautions</li> </ul>		<b>1</b>	<b>1</b>
3.	Make compost by pit method	<b><u>Pit method:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Advantages</li> <li>• Materials</li> <li>• Process and steps</li> <li>• Characteristics</li> <li>• Precautions</li> </ul>		<b>1</b>	<b>1</b>
4.	Make compost by mix method	<b><u>Mix method:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Advantages</li> <li>• Materials</li> <li>• Process and steps</li> <li>• Characteristics</li> <li>• Precautions</li> </ul>		<b>1</b>	<b>1</b>
5.	Make compost by container / bin method	<b><u>Container / bin method:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Advantages</li> <li>• Materials</li> </ul>		<b>1</b>	<b>1</b>

		<ul style="list-style-type: none"> <li>• Process and steps</li> <li>• Characteristics</li> <li>• Precautions</li> </ul>			
6.	Make vermi-compost	<b><u>Vermi-compost:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Advantages</li> <li>• Materials</li> <li>• Process and steps</li> <li>• Characteristics</li> <li>• Precautions</li> </ul>		<b>1</b>	<b>1</b>
7.	Evaluate the product / compost	<b><u>Evaluation of compost:</u></b> <ul style="list-style-type: none"> <li>• Importance for evaluation</li> <li>• Criteria of evaluation</li> <li>• Methods/process</li> <li>• Characteristics of good compost</li> <li>• Grading system</li> </ul>		<b>1</b>	<b>1</b>
8.	Store the product / compost	<b><u>Storage:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Methods</li> <li>• Time/duration</li> <li>• Importance</li> <li>• Precautions</li> </ul>		<b>1</b>	<b>1</b>
9.	Apply compost in field / garden / nursery	<b><u>Compost application:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Quantity/rate/ratio</li> <li>• Methods /processes / steps</li> <li>• Precautions to be followed</li> </ul>		<b>1</b>	<b>1</b>

## Module 4: Nursery Planning and Management

<b>Course Description:</b> This module deals with knowledge and skills related nursery planning and management.							
<b>Course Objectives:</b> At the end of this course, trainees will be able to:							
<ul style="list-style-type: none"> <li>• Select site for nursery.</li> <li>• Develop plant houses.</li> <li>• Manage small scale irrigation/drainage system.</li> <li>• Apply manure.</li> <li>• Perform mulching.</li> <li>• Perform weeding.</li> <li>• Manage waste.</li> </ul>							
<b>Total Time : 60 hrs</b>		<b>Theory: 12</b>	<b>Practical: 48</b>	<b>Time hr</b>			
<b>S.N.</b>	<b>Tasks</b>	<b>Related Technical Knowledge</b>			<b>T</b>	<b>P</b>	<b>T</b>
1.	Select site	<b><u>Site selection for Nursery:</u></b> <ul style="list-style-type: none"> <li>• Enlist criteria for site selection for a nursery</li> <li>• Observe the site</li> <li>• Select site for nursery applying criteria</li> <li>• Evaluate the selected site against criteria</li> <li>• Take precautions</li> </ul>			1	1	2
2.	Prepare production plan	<b><u>Production plan:</u></b> <ul style="list-style-type: none"> <li>• Definition/concept</li> <li>• Importance and uses</li> <li>• Process and methods of plan preparation</li> <li>• Components of production plan</li> <li>• Decide time (Season) for different major activities                             <ul style="list-style-type: none"> <li>▪ Seed collection</li> <li>▪ Seeds sowing</li> <li>▪ Transplant</li> <li>▪ Propagation                                     <ul style="list-style-type: none"> <li>○ Cuttings</li> <li>○ Grafting</li> <li>○ Layering</li> </ul> </li> <li>▪ Growing cut flowers</li> <li>▪ Harvesting</li> <li>▪ Selling plants</li> </ul> </li> <li>• Taken precautions</li> </ul>				2	2
3.	Prepare layout as per given design of the nursery	<b><u>Layout:</u></b> <ul style="list-style-type: none"> <li>• Concept, importance, and uses</li> <li>• Method – why, where, when, and how to lay out the nursery?</li> <li>• Method of map reading</li> </ul>				3	3

		<ul style="list-style-type: none"> <li>• Methods of using scale in the layout</li> <li>• Pegging method</li> <li>• Locating points for plants</li> <li>• Precautions to be followed</li> <li>• Prepare complete lay out as per design</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>			
4.	Identify and use Materials/ tools/equipment/ machineries	<p><b><u>Materials/ tools/equipment/machineries:</u></b></p> <ul style="list-style-type: none"> <li>• Concept, importance, and uses</li> <li>• Identification and function of each materials/tools/equipment/ machineries. (materials/tools/equipment/ machineries to be provided)</li> <li>• Explain Name – functions, market price, safety measures and storage</li> <li>• Precaution to be taken</li> <li>• Record keeping</li> </ul>	1		1
5.	Perform nursery registration	<p><b><u>Nursery registration:</u></b></p> <ul style="list-style-type: none"> <li>• Why, where, when, and how to register the nursery?</li> <li>• Legal registration process and its importance</li> <li>• Precautions to be followed</li> </ul>		2	2
6.	Arrange tools and materials	<p><b><u>Tools and materials for nursery:</u></b></p> <ul style="list-style-type: none"> <li>• Identification</li> <li>• Functions and use</li> <li>• Care, maintenance, and storage</li> <li>• Precautions to be followed</li> <li>• Record keeping</li> </ul>	1	1	2
7.	Develop concept of plant houses	<p><b><u>Plant houses:</u></b></p> <ul style="list-style-type: none"> <li>• Concept, types, importance and advantages</li> <li>• Visit and be familiar with the construction concept of plant house.</li> <li>• Be familiar with construction materials</li> </ul> <p><b><u>Green house</u></b></p> <ul style="list-style-type: none"> <li>• Glass house</li> <li>• Fiber glass house</li> <li>• Wooden house</li> <li>• Net house</li> <li>• Polythene house</li> <li>• Cloche /plastic tunnel</li> <li>• Precautions to be followed</li> </ul>	1	1	2

8.	Develop concept of house plants	<p><b><u>House plants:</u></b></p> <ul style="list-style-type: none"> <li>• Concept, Importance and advantages of house plants</li> <li>• Types: concepts, identification, and value of - <ul style="list-style-type: none"> <li>▪ Green house plants</li> <li>▪ Glass house plants</li> <li>▪ Fiber glass house plants</li> <li>▪ Wooden house plants</li> <li>▪ Net house plants</li> <li>▪ Polythene house plants</li> <li>▪ Cloche /plastic tunnel plants</li> </ul> </li> <li>• Precautions to be followed and record keeping</li> </ul>	1	1	2
9.	Be familiar with shade house	<p><b><u>Introduction of Shade house:</u></b></p> <ul style="list-style-type: none"> <li>• Concept/Definition</li> <li>• Importance and need</li> <li>• Materials needed</li> <li>• Site visit and be familiar with its functions and type including construction materials</li> <li>• Precautions to be taken</li> </ul>	1	1	2
10.	Be familiar with green house	<p><b><u>Green house construction:</u></b></p> <ul style="list-style-type: none"> <li>• Concept/Definition</li> <li>• Importance and need</li> <li>• Materials needed</li> <li>• Site visit and be familiar with its functions and type</li> <li>• Precautions to be taken</li> </ul>	1	2	3
11.	Be familiar with net house	<p><b><u>Net house construction:</u></b></p> <ul style="list-style-type: none"> <li>• Concept/Definition</li> <li>• Importance and need</li> <li>• Materials needed</li> <li>• Site visit and be familiar with its functions and type</li> <li>• Precautions to be taken</li> </ul>	1	2	3
12.	Be familiar with polythene house	<p><b><u>Polythene house construction:</u></b></p> <ul style="list-style-type: none"> <li>• Concept/Definition</li> <li>• Importance and need</li> <li>• Materials needed</li> <li>• Site visit and be familiar with its functions and type</li> <li>• Precautions to be taken</li> </ul>	1	1	2
13.	Be familiar with cloche	<p><b><u>Cloche /plastic tunnel construction:</u></b></p>	1	1	2

		<ul style="list-style-type: none"> <li>• Concept/Definition</li> <li>• Importance and need</li> <li>• Materials needed</li> <li>• Site visit and be familiar with its functions and type</li> <li>• Precautions to be taken</li> </ul>			
14.	Manage small scale irrigation / drainage system	<p><b><u>Irrigation and Drainage</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Relation between irrigation and drainage</li> <li>• Function and source of water for plant.</li> <li>• Methods</li> <li>• Types</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>	1	3	4
15.	Prepare media for Nursery	<p><b><u>Media preparation:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance and uses</li> <li>• The standard ratio of soil, sand and manure for various purposes.</li> <li>• Sterilization of the media</li> <li>• Where, when, and how to prepare media</li> <li>• Precautions to be followed</li> <li>• How to keep record</li> </ul>		2	2
16.	Prepare modified soil for nursery for Nursery	<p><b><u>Modified soil preparation for nursery:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance and uses</li> <li>• When, where, and how to prepare modified soil preparation for nursery</li> <li>• Precautions to be followed</li> <li>• How to keep record</li> </ul>		3	3
17.	Select seeds	<p><b><u>Seed selection:</u></b></p> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Importance</li> <li>• Type</li> <li>• Criteria for seed selection</li> <li>• The quality of seeds</li> <li>• The viability of seeds</li> <li>• Precautions to be followed</li> <li>• How to keep records</li> </ul>		2	2
18.	Fill poly-bags	<p><b><u>Poly bag filling:</u></b></p> <ul style="list-style-type: none"> <li>• Concept, need, and importance</li> <li>• Where, when, how much, with what,</li> </ul>		1	1

		<p>and how to fill poly bags</p> <ul style="list-style-type: none"> <li>• The size of poly-bags</li> <li>• The quality of poly-bags</li> <li>• The quantity of media</li> <li>• The level of the media to be filled up</li> <li>• The precautions to be taken</li> <li>• The method of keeping record</li> </ul>			
19.	Perform manuring	<p><b><u>Manuring:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Types and identification</li> <li>• Why, when, where, how much to apply manure</li> <li>• The precautions to be taken</li> <li>• Record keeping</li> </ul>		<b>1</b>	<b>1</b>
20.	Perform fertilizing	<p><b><u>Fertilizing:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Types and identification</li> <li>• Knowledge on why, when, where, how much, and how to apply fertilizers</li> <li>• Fertilizer dose calculation</li> <li>• The knowledge on foliar spray</li> <li>• The right process of spraying</li> <li>• The precautions to be taken</li> <li>• The method of record keeping</li> </ul>		<b>1</b>	<b>1</b>
21.	Perform Lifting and packing of plants	<p><b><u>Lifting and packing of plants:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Methods</li> </ul>		<b>2</b>	<b>2</b>
22.	Shape / train / prune plants	<p><b><u>Training and pruning of plants:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Methods of pruning systems (leader, open leader, and modified leader systems)</li> <li>• The method of wiring</li> <li>• Precautions to be followed</li> <li>• Keeping records</li> </ul>		<b>2</b>	<b>2</b>
23.	Perform mulching	<p><b><u>Mulching:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance/advantages</li> <li>• Methods</li> </ul>		<b>1</b>	<b>1</b>

		<ul style="list-style-type: none"> <li>• Materials for mulching</li> <li>• Mulching time</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>			
24.	Perform staking	<b><u>Staking:</u></b> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>		<b>1</b>	<b>1</b>
25.	Perform pinching	<b><u>Pinching:</u></b> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>		<b>1</b>	<b>1</b>
26.	Perform dead headings	<b><u>Dead heading:</u></b> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>		<b>1</b>	<b>1</b>
27.	Perform spraying	<b><u>Spraying:</u></b> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Precautions to be taken</li> </ul>		<b>1</b>	<b>1</b>
28.	Spray vitamins /plant growth regulators(PGR)	<b><u>Spraying of vitamins / PGR:</u></b> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>		<b>2</b>	<b>2</b>
29.	Perform weeding	<b><u>Weeding:</u></b> <ul style="list-style-type: none"> <li>• Definition/concept</li> <li>• Importance</li> <li>• Concept of weed control</li> <li>• Methods</li> <li>• Regular weeding scheme</li> <li>• Post weeding operation</li> <li>• Precautions to be taken</li> <li>• Method of record keeping</li> </ul>		<b>1</b>	<b>1</b>
30.	Protect nursery plants	<b><u>Nursery plant protection:</u></b>		<b>1</b>	<b>1</b>

		<ul style="list-style-type: none"> <li>• Definition/ concept</li> <li>• Importance</li> <li>• Possible problems and causes</li> <li>• Nursery plant protection technology</li> <li>• Calendar of operation for nursery protection</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>			
31.	Perform repotting	<p><b><u>Repotting:</u></b></p> <ul style="list-style-type: none"> <li>• Concept and importance of repotting</li> <li>• Method of making pot ready for repotting</li> <li>• Repotting method- when, where, how to carry out repotting</li> <li>• Precautions to be taken</li> <li>• Method of record keeping</li> </ul>		<b>1</b>	<b>1</b>
32.	Paint pots	<p><b><u>Painting of pots:</u></b></p> <ul style="list-style-type: none"> <li>• Concept and need of painting the pots</li> <li>• Importance of painting</li> <li>• Tools and materials needed</li> <li>• Methods of painting safely</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>		<b>1</b>	<b>1</b>
33.	Manage waste	<p><b><u>Waste management:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance/Advantages</li> <li>• Harmful effect of waste</li> <li>• Types of waste/Classification</li> <li>• Nature and characteristics of Garden/nursery waste</li> <li>• Methods</li> <li>• Time table</li> <li>• Precautions to be taken</li> </ul>	<b>1</b>	<b>2</b>	<b>3</b>

## Module 5: Plant Protection

<b>Course Description:</b> This module deals with knowledge and skills related to plant protection.						
<b>Course Objectives:</b> At the end of this course, trainees will be able to:						
<ul style="list-style-type: none"> <li>• Protect plants from common diseases and insect.</li> <li>• Protect plants against disorder.</li> <li>• Control insects by organic and inorganic methods.</li> <li>• Diagnose disease and pests.</li> <li>• Apply pesticides/insecticide.</li> <li>• Perform IPM.</li> </ul>						
<b>Total Time : 65 hrs</b>		<b>Theory:</b>	<b>Practical:</b>	<b>Time hr</b>		
<b>S.N.</b>	<b>Tasks</b>	<b>Related Technical Knowledge</b>		<b>T</b>	<b>P</b>	<b>TT</b>
1.	Develop concept of plant protection and protect plants from common diseases and insect pest in the garden.	<b><u>Plant protection:</u></b> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Concept and</li> <li>• Importance</li> <li>• Health and safety procedures</li> </ul>		1	5	6
2.	Be familiar with Insect pest	<b><u>Insect pest:</u></b> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Types</li> <li>• Characteristics</li> <li>• Types of damage</li> <li>• Health and safety procedures</li> </ul>		1	5	6
3.	Be familiar with Disease	<b><u>Disease:</u></b> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Types</li> <li>• Characteristics</li> <li>• Types of damage</li> <li>• Health and safety procedures</li> </ul>		1	5	6
4.	Be familiar with other harmful effect and agent of garden	<b><u>Other harmful effect and agent of garden:</u></b> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Types</li> <li>• Characteristics</li> <li>• Types of damage</li> <li>• Health and safety procedures</li> </ul>		1	3	4
5.	Protect plants against disorder	<b><u>Plant disorders:</u></b> <ul style="list-style-type: none"> <li>• Black spot of roses</li> <li>• Chlorosis</li> <li>• Damping off</li> <li>• Dollar spot</li> <li>• Downy mildew</li> <li>• Fairy rings</li> </ul>		1	3	4

		<ul style="list-style-type: none"> <li>• Fusarium patch and snow mould</li> <li>• Ophiobolus patch</li> <li>• Powdry mildew</li> <li>• Rust</li> </ul>			
6.	Protect plants against following insects pests	<p><b><u>Protection against insects pests:</u></b></p> <ul style="list-style-type: none"> <li>• Aphids</li> <li>• Ants</li> <li>• Caterpillars</li> <li>• Chafer beetles</li> <li>• Cutworms</li> <li>• Earthworm</li> <li>• Earwigs</li> <li>• Leaf hoppers</li> <li>• Leather jackets</li> <li>• Mealy bugs</li> <li>• Red spider mites</li> <li>• Scale insects</li> <li>• Slug and snails</li> <li>• Termites</li> <li>• Thrips</li> <li>• White fly</li> <li>• wire worms</li> </ul>	2	4	6
7.	Control insects by organic methods	<p><b><u>Controlling insects by organic methods:</u></b></p> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Concept and</li> <li>• Importance</li> <li>• Advantages and disadvantages</li> <li>• Required materials</li> <li>• Process/methods</li> <li>• Precautions</li> </ul>	1	4	5
8.	Control insects by inorganic methods	<p><b><u>Controlling insects by inorganic methods:</u></b></p> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Concept and</li> <li>• Importance</li> <li>• Advantages and disadvantages</li> <li>• Required materials</li> <li>• Process/methods</li> <li>• Precautions</li> </ul>	1	5	6
9.	Develop the concept of disease control	<p><b><u>Concept of disease control:</u></b></p> <ul style="list-style-type: none"> <li>• Meaning of prevention, treatment, control and management of diseases</li> <li>• Control disease by</li> </ul>	1	4	5

		<ul style="list-style-type: none"> <li>▪ Organic methods</li> <li>▪ Inorganic methods</li> <li>▪ Cultural control</li> <li>▪ Crop rotation</li> <li>▪ Biological control</li> <li>▪ Physical control</li> <li>▪ Use of resistant varieties</li> <li>▪ Use mix cropping system</li> <li>▪ Planting and harvesting time adjustment</li> <li>▪ Use of clean seed and planting materials</li> <li>▪ Use of hot water treatment method</li> <li>▪ Hygienic growing of plants</li> </ul>			
10.	Prepare solutions	<p><b><u>Preparation of solutions:</u></b></p> <ul style="list-style-type: none"> <li>• Read the label and identify quantity</li> <li>• Procedure to prepare the solutions</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>		2	2
11.	Spray solution	<p><b><u>Spraying prepared solutions:</u></b></p> <ul style="list-style-type: none"> <li>• Why, when, how much and how to spray chemicals to plants</li> <li>• Procedure to spray the solution of fungicide and pesticide to plants</li> <li>• Precautions to be taken</li> <li>• Health and safety regulations</li> <li>• Record keeping</li> </ul>		2	2
12.	Follow safety measures	<p><b><u>Follow of safety measures:</u></b></p> <ul style="list-style-type: none"> <li>• Safe ways of spraying the solution</li> <li>• Precautions to be taken-what precautions, when, where, and how to follow</li> <li>• Health and safety regulations</li> <li>• Record keeping</li> </ul>	1	2	3
13.	Perform IPM	<p><b><u>Integrated pest management(IPM):</u></b></p> <ul style="list-style-type: none"> <li>• Concept, importance, principles &amp; practices</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>	2	7	9
14.	Prepare calendar of operation	<p><b><u>Preparation of calendar of operation:</u></b></p> <ul style="list-style-type: none"> <li>• Concept, importance, and use</li> <li>• Factors or things to be considered while preparing the calendar of</li> </ul>		2	2

		<p>operation</p> <ul style="list-style-type: none"><li>• Method of preparing the calendar of operation for disease &amp; pest management- when, and how to prepare</li><li>• Precautions to be taken</li><li>• Record keeping</li></ul>			
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## Module 6: Introduction to types of Garden

<b>Course Description:</b> This module deals with knowledge and skills related to various garden.							
<b>Course Objective:</b> At the end of this course, trainees will be able to:							
<ul style="list-style-type: none"> <li>• Be familiar with various types of garden.</li> </ul>							
<b>Total Time :</b> 30 hrs		<b>Theory:</b> 6	<b>Practical:</b> 24		<b>Time hrs</b>		
S. N.	Tasks	Related technical knowledge			T	P	T
1.	Be familiar with Formal garden	<b><u>Formal garden:</u></b> <ul style="list-style-type: none"> <li>• Concept and definition</li> <li>• Scope /Importance</li> <li>• Features</li> <li>• Components</li> <li>• Characteristics</li> <li>• Differences and similarities of informal and formal garden</li> <li>• Season for development</li> <li>• Required materials</li> <li>• List of plants</li> </ul>			1	3	4
2.	Be familiar with Mugal garden	<b><u>Mugal garden:</u></b> <ul style="list-style-type: none"> <li>• Concept and definition</li> <li>• Scope /Importance</li> <li>• Features</li> <li>• Components</li> <li>• Characteristics</li> <li>• Comparison of each other</li> <li>• Season for development</li> <li>• Required materials</li> <li>• List of plants</li> </ul>			1	3	4
3.	Be familiar with informal garden	<b><u>Informal garden:</u></b> <ul style="list-style-type: none"> <li>• Concept and definition</li> <li>• Scope /Importance</li> <li>• Features</li> <li>• Components</li> <li>• Characteristics</li> <li>• Differences and similarities of informal and formal garden</li> <li>• Season for development</li> <li>• Required materials</li> <li>• List of plants</li> </ul>			1	3	4
4.	Be familiar with Japanese garden	<b><u>Japanese garden:</u></b> <ul style="list-style-type: none"> <li>• Concept and definition</li> <li>• Scope /Importance</li> <li>• Features</li> </ul>			1	3	4

		<ul style="list-style-type: none"> <li>• Components</li> <li>• Characteristics</li> <li>• Differences and similarities of each other</li> <li>• Season for development</li> <li>• Required materials</li> <li>• List of plants</li> </ul>			
5.	Be familiar with other garden ( Orchid, Rose, Korian, Chinese, Rock, Patio, Sun VS shade, Rock, English, Water garden	<p><b><u>Orchid, Rose, Korian, Chinese, Rock, Patio, Sun VS shade, Rock, English, Water gardens:</u></b></p> <ul style="list-style-type: none"> <li>• Concept and definition</li> <li>• Scope /Importance</li> <li>• Features</li> <li>• Components</li> <li>• Characteristics</li> <li>• Differences and similarities of each other</li> <li>• Season for development</li> <li>• Required materials</li> <li>• List of plants</li> </ul>	<b>1</b>	<b>6</b>	<b>7</b>
6.	Visit/Observe each garden at least once during the training period	<p><b><u>Observe and discuss about :</u></b></p> <ul style="list-style-type: none"> <li>• Features</li> <li>• Components</li> <li>• Characteristics</li> <li>• Differences and similarities of each other</li> <li>• Required materials</li> <li>• List of plants</li> </ul>	<b>1</b>	<b>6</b>	<b>7</b>

## Module 7: Development of Gardens

<b>Course Description:</b> This module deals with knowledge and skills related to garden development.							
<b>Course Objectives:</b> At the end of this course, trainees will be able to:							
<ul style="list-style-type: none"> <li>• Layout garden.</li> <li>• Select plants</li> <li>• Perform plantation</li> <li>• Develop lawn.</li> </ul>							
<b>Total Time : 15 hrs</b>		<b>Theory: 3</b>	<b>Practical:12</b>		<b>Time hr</b>		
<b>S.N.</b>	<b>Tasks</b>	<b>Related Technical Knowledge</b>			<b>T</b>	<b>P</b>	<b>T</b>
1.	Observe site	<b><u>Site observation:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Need</li> <li>• Essential criteria for observing site for the garden development</li> <li>• Keeping record of all the conditions of the site</li> <li>• Prepare report</li> <li>• Precautions to be taken</li> </ul>				<b>1</b>	<b>1</b>
2.	Lay out garden as per given design	<b><u>Garden Lay out garden:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Read map</li> <li>• Receive instruction</li> <li>• Spacing</li> <li>• Measurement and scale as per map</li> <li>• Components and specific features of each garden</li> <li>• Mark for specific points</li> <li>• Precautions to be taken</li> <li>• Prepare report</li> </ul>			<b>1</b>	<b>1</b>	<b>2</b>
3.	Select plant species	<b><u>Selection of plant species:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Criteria for plant species selection</li> <li>• Season, time and features of garden</li> <li>• Identification of proposed species</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>			<b>1</b>	<b>1</b>	<b>2</b>
4.	Perform plantation	<b><u>Plantation:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Identification of plants</li> <li>• Method of plantation for <ul style="list-style-type: none"> <li>▪ trees</li> </ul> </li> </ul>				<b>1</b>	<b>1</b>

		<ul style="list-style-type: none"> <li>▪ Shrubs</li> <li>▪ Hedges</li> <li>▪ Borders and</li> <li>▪ Seasonal plants</li> <li>• Position of plants</li> <li>• Precautions to be taken.</li> <li>• Records keeping</li> </ul>			
5.	Develop gardens: <ul style="list-style-type: none"> <li>• Formal (Mughal garden)</li> <li>• Informal ( Japanese garden)</li> </ul>	<b><u>Discussion for each types:</u></b> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Advantages</li> <li>• Specific features</li> <li>• Components</li> <li>• Species of plants</li> <li>• Season for development</li> <li>• Development methods/process/steps</li> <li>• Visit and observe each garden at least once during the training period</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>	<b>1</b>	<b>4</b>	<b>5</b>
6.	Develop lawn	<b><u>Lawn development:</u></b> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Features</li> <li>• Types</li> <li>• Species of plants</li> <li>• Methods/Steps for development</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>		<b>2</b>	<b>2</b>

## Module 8: Maintenance of Garden and Garden Plants

<b>Course Description:</b> This module deals with knowledge and skills related to maintenance of garden and garden plants.						
<b>Course Objectives:</b> At the end of this course, trainees will be able to:						
<ul style="list-style-type: none"> <li>• Perform hedge and edge cutting.</li> <li>• Perform disbudding.</li> <li>• Perform training and pruning.</li> <li>• Perform sweeping.</li> <li>• Apply manure and fertilizer.</li> </ul>						
<b>Total Time : 25 hrs</b>		<b>Theory: 5</b>	<b>Practical:20</b>	<b>Time hours</b>		
<b>S.N.</b>	<b>Tasks</b>	<b>Related Technical Knowledge</b>		<b>T</b>	<b>P</b>	<b>T</b>
1.	Perform hedge and edge cutting	<b><u>Hedge and edge cutting:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Shapes of hedges</li> <li>• Methods</li> <li>• Time, season, interval</li> <li>• Precautions to be followed</li> <li>• Keeping records</li> </ul>		<b>1</b>	<b>2</b>	<b>3</b>
2.	Remove mosses and stains	<b><u>Removing mosses and stains:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>			<b>1</b>	<b>1</b>
3.	Perform disbudding	<b><u>Disbudding:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Advantages</li> <li>• Time, season, duration</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>			<b>1</b>	<b>1</b>
4.	Perform pinching	<b><u>Pinching:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Advantages</li> <li>• Time, season, duration</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>			<b>1</b>	<b>1</b>
5.	Perform supporting/staking	<b><u>Supporting/staking:</u></b>			<b>1</b>	<b>1</b>

		<ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Time for giving support / stake</li> <li>• Materials</li> <li>• Method</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>			
6.	Perform mulching	<p><b><u>Mulching:</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Materials</li> <li>• Method</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>		<b>1</b>	<b>1</b>
7.	Perform pruning	<p><b><u>Pruning:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/concept</li> <li>• Importance</li> <li>• Advantages and disadvantages</li> <li>• Methods</li> <li>• Post pruning activities</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>	<b>1</b>	<b>3</b>	<b>4</b>
8.	Perform training to plants	<p><b><u>Training :</u></b></p> <ul style="list-style-type: none"> <li>• Definition/concept</li> <li>• Importance</li> <li>• Advantages and disadvantages</li> <li>• Methods</li> <li>• Systems of shaping – leader, open leader, modified leader systems</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>	<b>1</b>	<b>1</b>	<b>2</b>
9.	Perform planting and replanting	<p><b><u>Planting and replanting:</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Materials</li> <li>• Method</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>	<b>1</b>	<b>1</b>	<b>2</b>
10.	Perform sweeping	<p><b><u>Sweeping:</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Materials</li> <li>• Method</li> </ul>		<b>1</b>	<b>1</b>

		<ul style="list-style-type: none"> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>			
11.	Clean fallen leaves	<p><b><u>Cleaning fallen leaves:</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Materials</li> <li>• Method</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>		<b>1</b>	<b>1</b>
12.	Mow and Hoe the lawn	<p><b><u>Mowing and hoeing the lawn:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Time, season, duration</li> <li>• Handling mowing machine</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>		<b>2</b>	<b>2</b>
13.	Apply manure and fertilizer	<p><b><u>Applying manure and fertilizer:</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Knowledge on manure and fertilizer</li> <li>• Time, season, duration</li> <li>• Method of drying</li> <li>• Method of preparing fertilizer</li> <li>• Method of applying manure and fertilizer</li> <li>• Precautions to be taken</li> <li>• Record keeping</li> </ul>	<b>1</b>	<b>4</b>	<b>5</b>

## Module 9: Plant Propagation

<b>Course Description:</b> This module deals with knowledge and skills related to plant propagation.					
<b>Course Objectives:</b> At the end of this course, trainees will be able to:					
<ul style="list-style-type: none"> <li>• Propagate plants.</li> <li>• Transplant seedlings/sapling.</li> </ul>					
<b>Total Time : 45 hrs</b>		<b>Theory: 9</b>	<b>Practical:36</b>		<b>Time hour</b>
<b>S.N.</b>	<b>Tasks</b>	<b>Related Technical Knowledge</b>	<b>T</b>	<b>P</b>	<b>T</b>
1.	Be familiar with plant propagation	<b><u>Plant propagation:</u></b> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Importance</li> <li>• Methods</li> <li>• Reproductive (Advantages and Disadvantages)</li> <li>• Vegetative (Advantages and Disadvantages)</li> </ul>	1	1	2
2.	Propagate plants by cuttings: <ul style="list-style-type: none"> <li>• Soft cutting</li> <li>• Semi hard cutting</li> <li>• Hard wood cutting</li> <li>• Leaf cutting</li> <li>• Tip cutting</li> <li>• Root cutting</li> </ul>	<b><u>Propagation by cuttings:</u></b> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Advantages and disadvantages</li> <li>• Methods</li> <li>• Hardiness of plants (hard wood, semi-hard wood and soft wood)</li> <li>• Listing plants which are suitable for cutting</li> <li>• Treatment of with hormone</li> <li>• Use of media</li> <li>• Precautions to be taken</li> </ul>	1	6	7
3.	Propagate plants by layering: <ul style="list-style-type: none"> <li>• Simple layering</li> <li>• Trench layering</li> <li>• Air layering</li> <li>• Mound layering</li> </ul>	<b><u>Propagation by layering:</u></b> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Importance</li> <li>• Advantages and disadvantages</li> <li>• Listing plants which are suitable for layering</li> <li>• Methods</li> <li>• Use of hormone</li> <li>• Use of media</li> <li>• Precautions to be taken</li> </ul>	1	4	5
4.	Propagate plants by division	<b><u>Propagation by division:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Advantages and disadvantages</li> <li>• Listing plants which are to be</li> </ul>	1	2	3

		<p>propagated by division method</p> <ul style="list-style-type: none"> <li>• Methods of division</li> <li>• Method of replanting</li> <li>• Precautions to be taken</li> </ul>			
5.	<p>Propagate plants by grafting:</p> <ul style="list-style-type: none"> <li>• Tongue grafting</li> <li>• Splice grafting</li> <li>• Approach grafting</li> <li>• Cleft grafting</li> <li>• Bark grafting</li> <li>• Enarching</li> <li>• Bridge grafting</li> <li>• Green wood grafting</li> <li>• Stone grafting</li> </ul>	<p><b><u>Propagation by grafting:</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Advantages and disadvantages of each</li> <li>• Specify plants for each methods</li> <li>• Methods of each grafting</li> <li>• Precautions to be taken</li> </ul>	<b>1</b>	<b>9</b>	<b>10</b>
6.	<p>Propagate plants by budding:</p> <ul style="list-style-type: none"> <li>• T-budding</li> <li>• Inverted budding</li> <li>• Ring budding</li> <li>• Clip budding</li> <li>• I- budding</li> </ul>	<p><b><u>Propagation by budding:</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Advantages and disadvantages of each</li> <li>• Specify plants for each methods</li> <li>• Methods of each budding</li> <li>• Precautions to be taken</li> </ul>	<b>1</b>	<b>5</b>	<b>6</b>
7.	<p>Propagate plants by seeds</p>	<p><b><u>Propagation by seeds:</u></b></p> <ul style="list-style-type: none"> <li>• Definition of seed</li> <li>• Definition of good seed</li> <li>• Characteristics of good seeds</li> <li>• Perform germination test</li> <li>• Seed collection methods</li> <li>• Seed storage methods</li> <li>• Precautions to be taken.</li> <li>• Method of record</li> </ul>	<b>1</b>	<b>2</b>	<b>3</b>
8.	<p>Propagate plants from bulbs</p>	<p><b><u>Propagation from bulbs:</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Advantages and disadvantages</li> <li>• Daughter bulbs</li> <li>• Specify plants for this methods</li> <li>• Method of growing daughter bulbs</li> <li>• Precautions to be taken.</li> <li>• Method of record keeping</li> </ul>	<b>1</b>	<b>2</b>	<b>3</b>
9.	<p>Propagate plants by offsets</p>	<p><b><u>Propagation by offsets:</u></b></p> <ul style="list-style-type: none"> <li>• Concept</li> </ul>	<b>1</b>	<b>2</b>	<b>3</b>

		<ul style="list-style-type: none"> <li>• Importance</li> <li>• Advantages and disadvantages of each</li> <li>• Specify plants for each methods</li> <li>• Methods of detaching offset from mother plant</li> <li>• Precautions to taken.</li> <li>• Recording keeping</li> </ul>			
10.	Transplant seedlings / saplings	<p><b><u>Transplanting seedlings / saplings:</u></b></p> <ul style="list-style-type: none"> <li>• Definition/Concept</li> <li>• Identification of seedlings and saplings</li> <li>• Handling of seedlings and saplings safely</li> <li>• Methods of detaching seedlings and saplings safely from seed beds</li> <li>• Precautions to taken.</li> <li>• Record keeping</li> </ul>		<b>3</b>	<b>3</b>

## Module 10: Arrangement and decoration of house plants

<b>Course Description:</b> This module deals with knowledge and skills related to plants arrangement and decoration.					
<b>Course Objectives:</b> At the end of this course, trainees will be able to:					
<ul style="list-style-type: none"> <li>• Layout for arrangement and decoration.</li> <li>• Manage plants.</li> <li>• Rearrange plants.</li> </ul>					
<b>Total Time : 20 hrs</b>		<b>Theory: 4</b>	<b>Practical:16</b>		<b>Time hour</b>
<b>S.N.</b>	<b>Tasks</b>	<b>Related Technical Knowledge</b>	<b>T</b>	<b>P</b>	<b>T</b>
1.	Observe site for house plants	<b><u>Observing site for house plants:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Criteria for observing the site for house plant decoration</li> <li>• Method of preparing a design of the site for the decoration of house plant</li> <li>• Precautions to be taken</li> <li>• Method of keeping records</li> </ul>	1	2	3
2.	Lay out for arrangement of houseplants	<b><u>Lay out for arrangement of houseplants :</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>	1	3	4
3.	Select plants	<b><u>Selecting plants:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Identification of house plants</li> <li>• Criteria for selecting house plants</li> <li>• Criteria for selecting pots/containers</li> <li>• Precautions to be taken</li> <li>• Method of keeping records</li> </ul>	1	2	3
4.	Select pots / containers	<b><u>Selecting pots / containers:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Types</li> <li>• Selection criteria</li> <li>• Identification of containers (Wooden, Terracotta, Bamboo, Cemented, plastic etc.)</li> <li>• Shape of pots/ containers (Square, Triangular, Rectangular etc.)</li> </ul>		1	1

		<ul style="list-style-type: none"> <li>• Size of pots/ containers</li> <li>• Precautions to be taken</li> <li>• The method of keeping records</li> </ul>			
5.	Clean / paint pots / containers	<b><u>Cleaning and painting</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Selection of paints</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>		<b>2</b>	<b>2</b>
6.	Grow / care / maintain / manage house plants	<b><u>Growing, caring, maintaining and managing house plants:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>	<b>1</b>	<b>2</b>	<b>3</b>
7.	Display houseplants	<b><u>Displaying houseplants:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>		<b>2</b>	<b>2</b>
8.	Rearrange houseplants	<b><u>Rearranging houseplants:</u></b> <ul style="list-style-type: none"> <li>• concept</li> <li>• Importance</li> <li>• Regular monitoring</li> <li>• Methods</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>		<b>2</b>	<b>2</b>

## Module 11: Preparation and Maintenance of Lawn

<b>Course Description:</b> This module deals with knowledge and skills related to preparation and maintenance of lawn.					
<b>Course Objectives:</b> At the end of this course, trainees will be able to:					
<ul style="list-style-type: none"> <li>• Be familiar with varieties and sources of grass seeds.</li> <li>• Manage lawn.</li> <li>• Perform weeding.</li> </ul>					
<b>Total Time :</b> 15 hrs		<b>Theory:</b> 3	<b>Practical:</b> 12		<b>Time hour</b>
<b>S. N.</b>	<b>Tasks</b>	<b>Related technical knowledge</b>	<b>T</b>	<b>P</b>	<b>T</b>
1.	Develop concept of lawn	<b><u>Concept of lawn:</u></b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Concept /Definition</li> <li>• Importance</li> <li>• Features</li> </ul>	<b>1</b>		<b>1</b>
2.	Identify varieties of grass	<b><u>Varieties of grass:</u></b> <ul style="list-style-type: none"> <li>• Varieties of grass and their identification</li> <li>• Characteristics of grass seeds</li> <li>• Cold season grass</li> <li>• Warm season grass</li> </ul>	<b>1</b>		<b>1</b>
3.	Identify sources of grass seeds	<b><u>Sources of grass seeds:</u></b> <ul style="list-style-type: none"> <li>• Reliable sources of grass seeds</li> </ul>	<b>1</b>		<b>1</b>
4.	Prepare lawn bed	<b><u>Preparing lawn bed:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Shape and size</li> <li>• Methods</li> <li>• Preparation</li> </ul>		<b>1</b>	<b>1</b>
5.	Apply fertilizer	<b><u>Applying fertilizer:</u></b> <ul style="list-style-type: none"> <li>• Type of plant</li> <li>• Type of fertilizer</li> <li>• Dose</li> <li>• Methods</li> </ul>		<b>1</b>	<b>1</b>
6.	Sow seeds	<b><u>Sowing seeds:</u></b> <ul style="list-style-type: none"> <li>• Type of seeds</li> <li>• Distance</li> <li>• Depth</li> <li>• Methods</li> </ul>		<b>1</b>	<b>1</b>
7.	Perform raking	<b><u>Raking:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Methods</li> </ul>		<b>1</b>	<b>1</b>
8.	Irrigate / drain the lawn	<b><u>Irrigating / draining the lawn:</u></b>		<b>1</b>	<b>1</b>

		<ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Time and season</li> <li>• Methods</li> </ul>			
9.	Perform weeding	<b><u>Weeding:</u></b> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Importance</li> <li>• Methods</li> </ul>		<b>1</b>	<b>1</b>
10.	Perform top dressing	<b><u>top dressing:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Time and season</li> <li>• Methods</li> </ul>		<b>1</b>	<b>1</b>
11.	Perform rolling	<b><u>Rolling:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Time and season</li> <li>• Methods</li> </ul>		<b>1</b>	<b>1</b>
12.	Control disease / pests	<b><u>Controlling disease / pests:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Time and season</li> <li>• Methods</li> </ul>		<b>2</b>	<b>2</b>
13.	Mow the lawn	<b><u>Mowing the lawn:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Time and season</li> <li>• Methods</li> </ul>		<b>1</b>	<b>1</b>
14.	Maintain height of the grass	<b><u>Maintaining height of the grass:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Type of grass</li> <li>• Methods</li> </ul>		<b>1</b>	<b>1</b>

## Module 12: Marketing of plants

<b>Course Description:</b> This module deals with knowledge and skills related to marketing of plants.							
<b>Course Objectives:</b> At the end of this course, trainees will be able to:							
<ul style="list-style-type: none"> <li>• Collect market demands.</li> <li>• Supply flowers and plants.</li> </ul>							
<b>Total Time : 10 hrs</b>		<b>Theory: 2</b>	<b>Practical:8</b>	<b>Time hr</b>			
<b>S.N.</b>	<b>Tasks</b>	<b>Related Technical Knowledge</b>			<b>T</b>	<b>P</b>	<b>T</b>
1.	Collect market information	<b><u>Market information:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Possible outlets of production</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>			2	1	3
2.	Visit nursery / wholesale flower market	<b><u>Nursery / wholesale flower market:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Methods</li> <li>• Information to be collected</li> <li>• visit report</li> </ul>				1	1
3.	Participate / sell in related exhibitions	<b><u>Exhibitions:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance of exhibition</li> <li>• Importance participation in exhibition</li> <li>• Selling of products</li> <li>• Precautions to be taken</li> <li>• Method of keeping records</li> </ul>				1	1
4.	Provide home delivery services	<b><u>Home delivery services:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Things to be considered for home delivery</li> <li>• Identification of the clients to home delivery</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>				1	1
5.	Arrange transportation	<b><u>Transportation:</u></b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Schedule preparation</li> <li>• Selection of means/ways of</li> </ul>				1	1

		transportation <ul style="list-style-type: none"> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>			
6.	Perform packaging of plants	<u><b>Packaging of plants:</b></u> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Safety measures</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>		<b>1</b>	<b>1</b>
7.	Perform safe handling of plants	<u><b>Safe handling of plants:</b></u> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Safety measures</li> <li>• Precautions to be taken</li> </ul>		<b>1</b>	<b>1</b>
8.	Supply flowers and plants	<u><b>Supply flowers and plants:</b></u> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Daily supply schedule</li> <li>• Methods of safe handling</li> <li>• Managing vehicle for regular supply</li> <li>• Methods of loading and unloading</li> <li>• Precautions to be taken</li> <li>• Keeping records</li> </ul>		<b>1</b>	<b>1</b>

## Module 13: Communication and professionalism

<b>Course Description:</b> This module deals with knowledge and skills related to communication and professional development.					
<b>Course Objectives:</b> At the end of this course, trainees will be able to:					
<ul style="list-style-type: none"> <li>• Communicate with others.</li> <li>• Develop professionalism.</li> </ul>					
<b>Total Time :</b> 5 hrs		<b>Theory:</b> 1		<b>Practical:</b> 4	
SN	Task	Related technical knowledge	Time hr		
			T	P	T
1.	Communicate with others	<u><b>Communication:</b></u> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Importance</li> <li>• Type</li> <li>• Mode and media</li> <li>• Process</li> <li>• Precautions to be taken</li> </ul>	1	2	3
2.	Develop Professionalism	<u><b>Developing professionalism:</b></u> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Importance</li> <li>• Books about professionalism</li> <li>• Different web sites</li> <li>• Professional association</li> <li>• How and why to browse www</li> <li>• Precautions to be taken</li> </ul>		2	2

## Module 14: Entrepreneurship Development

Total: 40 hrs		Theory: 18 hrs		Practical: 22 hrs	
<b>Course description</b>					
This course is designed to impart the knowledge and skills necessary for micro enterprise startup. The entire course intends to provide basics of entrepreneurial characteristics, finding viable business idea and developing business plan.					
<b>Course objectives</b>					
After completion of this course students will be able to:					
1. Understand concept of entrepreneurship and business					
2. Explore viable business idea					
3. Learn to prepare business plan					
SN	Task statements	Related technical knowledge	Time (hrs)		
			T	P	Tot.
1.	State the concept of entrepreneurship/ business/ enterprises	<ul style="list-style-type: none"> <li>• Introduction to entrepreneurship</li> <li>• Classification of enterprises</li> <li>• Benefits of self employment</li> </ul>	2		2
2.	Grow entrepreneurial attitudes	<ul style="list-style-type: none"> <li>• Wheel of success</li> <li>• Risk taking attitude</li> </ul>	3		3
3.	Generate viable business ideas	<ul style="list-style-type: none"> <li>• Business idea generation</li> <li>• Evaluation of business ideas</li> <li>• Creativity and innovation</li> </ul>	3		3
4.	Prepare business plan	<ul style="list-style-type: none"> <li>• Concept of market and marketing</li> <li>• Description of product or service</li> <li>• Selection of business location</li> <li>• Estimation of market share</li> <li>• Promotional measures</li> <li>• Required fixed assets and cost</li> <li>• Required raw materials and costs</li> <li>• Operation process flow</li> <li>• Required human resource and cost</li> <li>• Office overhead and utilities</li> <li>• Working capital estimation</li> <li>• Unit price calculation</li> <li>• Cost benefit analysis</li> <li>• Information collection guidelines</li> </ul>	9	20	29
5.	Prepare basic business records	<ul style="list-style-type: none"> <li>• Day book</li> <li>• Payable &amp; receivable account</li> </ul>	1	2	3
<b>Total:</b>			<b>18</b>	<b>22</b>	<b>40</b>
<b>Text book:</b>					
क) प्रशिक्षकहरूका लागि निर्मित निर्देशिका तथा प्रशिक्षण सामग्री, प्राविधिक शिक्षा तथा व्यावसायिक तालीम परिषद्, २०६९					
ख) प्रशिक्षार्थीहरूका लागि निर्मित पाठ्यसामग्री तथा कार्यपुस्तिका, प्राविधिक शिक्षा तथा व्यावसायिक तालीम परिषद् (अप्रकाशित), २०६९					
<b>Reference book:</b>					
Entrepreneur's Handbook, Technonet Asia, 1981					

## List of Tools, Materials & equipment

Trays (wooden)	Saws	Net
Trays (Plastic)	Secature	Hummer
Pots (Plastic)	Wheel barrow	Strings
Pots (soil)	Sieve	Khukuri
PGR (NAA, IBA, GA3, ethylene)	Gloves	Rubber belt
Seed/planting materials	Boots	Digger
Insecticide/pesticide/fungicide	Bucket	Hook
Organic	Seed boxes	Silpolyne sheet
fertilizer/manires/compost	Paper (full screen/rolling)	Polythene sheet
Chemical fertilizer	Transparencies	Fork
Plastic sheet	Transparencies marker	Spade
Cotton	Board maker	Scoop
Media	Permanent marker	Spoon
Poly bag	Loose print/ drawing paper or sheet/paper sheet	Scissors
Card board	Sign pen	Hedge shears
Thermocol board	Pencil	Ladder
Bomboo	Pilot pen	Wire
Silver paper	Dot pen	Wire cutter
PH meter/soil testing kit box	Scale	Supporting stick
Balance	Glue stick	Shovel/showel
First Aid kit box	Sharpener/eraser	Spirit level
Kuto	Color plastic sheet	Trowel
Kodalo	Hand outs	Brush/wire brush
Rake	Other teaching learning materials	Wooden plank
Khurpi/Sickle	Nails	Broom
Clod breaker	Pruning saw	Hoe
Watering can	Funnel	Chaphi
Pipes	Ruler	Lawn mower
Insect collecting box	Clip board	Stirring rod
Insect catching net	Drawing pen	Adhesive tape
Basket	Poster color	Collecting bucket
Sacks/dokos	Register	Oasis
Duster/sprayer	Note book	Jari
Measuring cylinder	Designs	Cello tape
Pegs	H.D.pipe	Pin-holder
Measuring tapes	TS bends	Sand
Cutting knife	Taps	Shade net
Ropes	Stove	Sieve
Thatching materials		
<b>Facilities:</b>		
Land for the cultivation of ornamental plants		Shade house
Well equipped class rooms		Green house
Necessary buildings		Well equipped library
Nursery		Store
Garden		Hostel (optimal)
Poly house		Canteen
Mist house		Vehicle
Callus house		Water supply
Meteorological station		Electricity supply

## Reading Materials

- Plant propagation, principles and practices by Hudson T. Hartmann, Dale E. Kester, Fred T. Davies, JR
- Fundamentals of horticulture by Dmond-Sen, Andrews, Halfacre
- Nepalma Ban Beeyu Tatha Nursery Avayash Pravidhi by I. Nepair & M.Robins
- Bagbani – part three by Ram Bahadur Shah, - Birendra Bir Singh Basnet
- Management of Forest Nurseries, part-III by Adam Harrison
- Hand book of Agriculture by ICAR, New Delhi
- Garden flowers by Dr. Vishnu Swarup, NBT, India
- Common Trees by Dr. H. Santapau, National Book Trust (NBT), India
- Growing Dahlias by S.C. Dey
- The 1996 Good gardens Guide edited by G.R. & Parker king Vernilion, London
- Flowering Trees by M.S. Randhawa, NBT, India
- Roses by Amitabha Mukhopadhyay, NBT, India
- Gardens by Laeeq Futehelly, NBT, India
- Basic book of natural gardening by W.E. Shewell Cooper
- Principles of horticulture by C.R. Adams, K.m. Bamford, M.P. Early
- Publications of floriculture Association-Nepal by Puspa Kheti, Bashudev karmacharya
- Floriculture and Landscaping by ed. Bose, Maiti, Dhua, Das
- Commercial flowers by Bose & Yadav
- Flowers in Nepal by Teiji Hayahawa
- Orchid in Nepal