



Horticulture - Landscaping

General Assessment Information

Blueprint Contents

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Test Type: The Horticulture-Landscaping industry-based credential is included in NOCTI's Job Ready assessment battery. Job Ready assessments measure technical skills at the occupational level and include items which gauge factual and theoretical knowledge. Job Ready assessments typically offer both a written and performance component and can be used at the secondary and post-secondary levels. Job Ready assessments can be delivered in an online or paper/pencil format.

Revision Team: The assessment content is based on input from secondary, post-secondary, and business/industry representatives from the states of Idaho, Indiana, Kentucky, Oklahoma, and Pennsylvania.



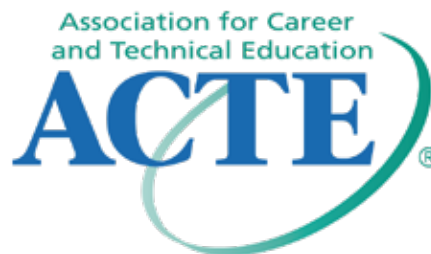
01.0601- Applied
Horticulture/Horticulture
Operations, General



Career Cluster 1- Agriculture, Food,
and Natural Resources



37-3011.00- Landscaping and
Groundskeeping Workers



The Association for Career and Technical Education (ACTE), the leading professional organization for career and technical educators, commends all students who participate in career and technical education programs and choose to validate their educational attainment through rigorous technical assessments. In taking this assessment you demonstrate to your school, your parents and guardians, your future employers and yourself that you understand the concepts and knowledge needed to succeed in the workplace. Good Luck!



NATIONAL COLLEGE CREDIT RECOMMENDATION SERVICE
University of the State of New York - Regents Research Fund

In the lower division
baccalaureate/associate degree
category, 3 semester hours in
Horticulture or Landscaping
Fundamentals

Written Assessment

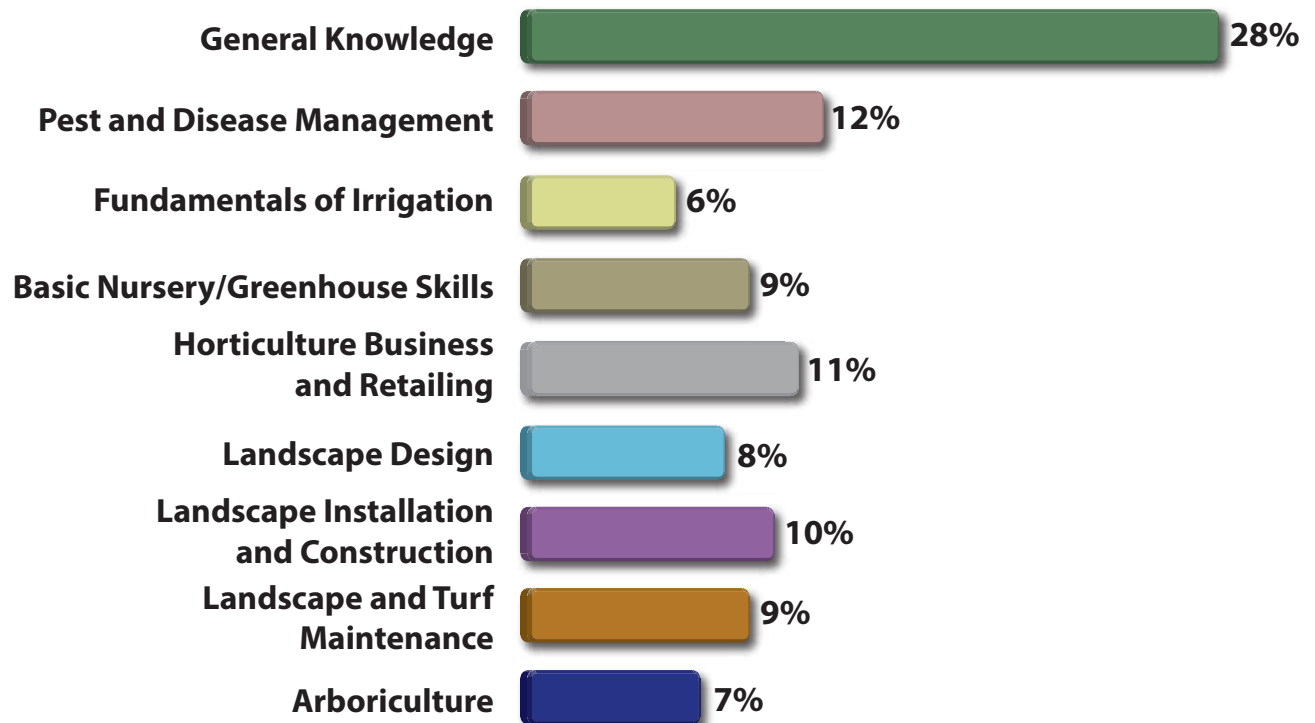
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 171

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

General Knowledge

- Describe knowledge of plant characteristics
- Identify parts of a plant and their purpose/function
- Demonstrate knowledge of plant classification/taxonomy
- Determine soil pH and possible modification
- Describe career opportunities and professional development
- Identify plant nutrient requirements
- Identify types and characteristics of soils and soil components
- Identify/describe types of fertilizers
- List landscaping safety standards
- Define landscaping terminology

Pest and Disease Management

- Identify and characterize pests, weed, and disease
- Demonstrate knowledge of pest management safety
- Demonstrate methods of pest, weeds, and disease control, including IPM

Fundamentals of Irrigation

- Describe characteristics of irrigation systems
- Describe various water control devices
- Identify types of watering techniques

Basic Nursery/Greenhouse Skills

- Describe methods of propagation
- Explain environmental management of greenhouses
- Identify growing structures

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Specific Standards and Competencies (continued)

Horticulture Business and Retailing

- Compute cost of product
- Determine mark-up and profit
- Measure for quantity needed
- Demonstrate sales techniques
- Maintain business records

Landscape Design

- Identify landscape areas (private, public, service areas)
- Describe material selection and methods of planting
- Compute square footage, area, and volume

Landscape Installation and Construction

- Identify tools and equipment
- Read blueprints and lay out site plans
- Construct water features and raised beds
- Construct decks, patios, and walkways
- Transplant various types of landscape materials



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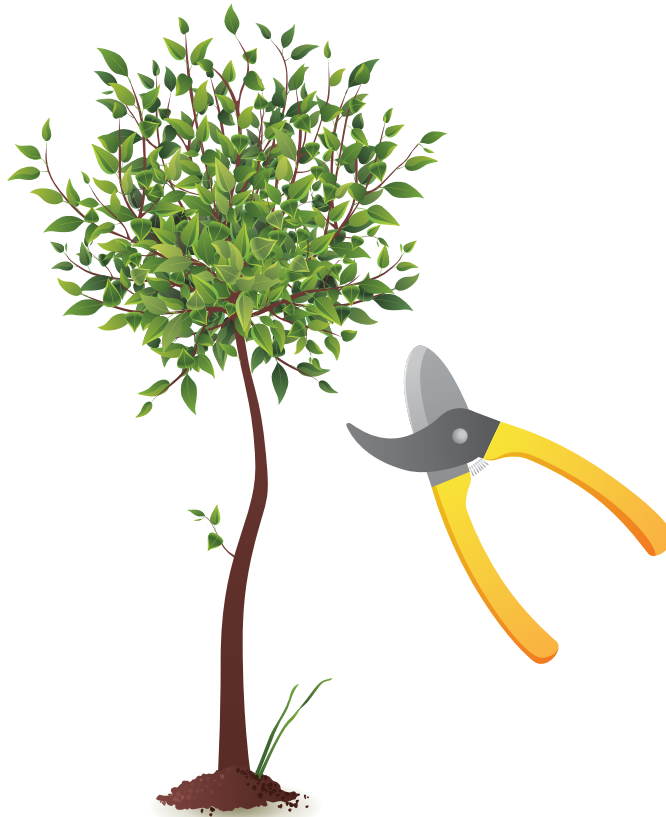
Specific Standards and Competencies (continued)

Landscape and Turf Maintenance

- Describe maintenance of equipment
- Inspect and operate power equipment
- Compare types and characteristics of grasses
- List types of mowers and their uses
- Identify golf course features and maintenance

Arboriculture

- Identify tree growth characteristics
- Explain treatment of tree disorders and injuries
- Explain proper pruning techniques



Sample Questions

Plants with stems that are soft and fleshy are described as being

- A. deciduous
- B. hardwoods
- C. herbaceous
- D. evergreen

A foliar disease would appear on which part of a plant?

- A. roots
- B. stems
- C. leaves
- D. flowers

Underground irrigation lines are usually made of

- A. cast iron
- B. PVC
- C. galvanized pipe
- D. brass

Grafting is a technique where

- A. new plants are produced quickly
- B. two different plants are united to grow as one
- C. herbaceous plants can be saved from one year to the next
- D. plants are propagated sexually

How many pounds of 10-6-4 fertilizer are needed to apply two pounds of actual nitrogen?

- A. 8 pounds
- B. 10 pounds
- C. 12 pounds
- D. 20 pounds

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Sample Questions (continued)

Soil porosity is directly related to the

- A. soil particle size
- B. elevation
- C. mineral content
- D. pH level

Borers are insect pests that can be most effectively controlled by

- A. repellent chemicals
- B. pheromone traps
- C. contact insecticides
- D. systemic insecticides

The term, _____, describes the process of propagating plants from seed.

- A. asexual propagation
- B. separation
- C. division
- D. sexual propagation

The rigid, often transparent, covering of a greenhouse is

- A. glazing
- B. aluminum
- C. shade material
- D. waxing

Pruning shears are ideal for cutting branches that are _____ or less in diameter.

- A. 1/2 inch
- B. 1 inch
- C. 1-1/2 inches
- D. 2 inches

Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

Administration Time: 2 hours

Number of Jobs: 5

Areas Covered:

22% Identify and Control Pests

Participants will inspect plants or photographs, accurately identify diseases and insect damage, consult reference guide and complete form.

18% Identify Equipment Features

Participants will identify features on a 4-cycle engine and 2-cycle engine.

24% Plant a Container-Grown Shrub

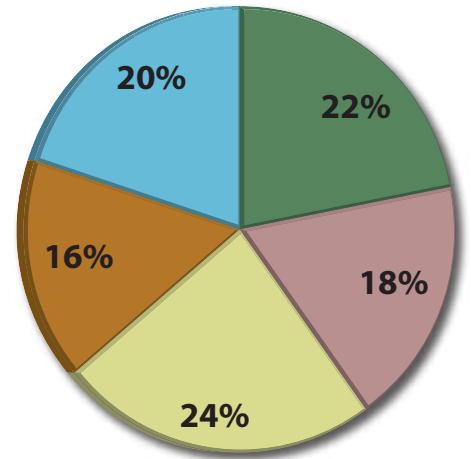
Participants will dig a hole; prepare backfill, plant the shrub, and backfill the hole.

16% Prune a Tree and an Evergreen Shrub

Participants will mark cuts, safely use pruning shears and saw and make quality cuts with both.

20% Stake out a Site-Plan—Entrance Walkway

Participants will choose a measuring device and plant stakes, layout an irrigation line, place the plant stakes and sidewalk and front entrance.



Sample Job

Identify and Control Pests

Maximum Time: 20 minutes

Participant Activity: The participant will go to the designated area and inspect the host plants for pest problems, identify the plant and pest problems from each specimen, consult approved pest control recommendations or production manual for appropriate method of control, complete the chart that is provided and indicate diagnosis, method of treatment, and rate of application.

