

Specific Competencies and Skills Tested 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

Specific Competencies and Skills 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

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

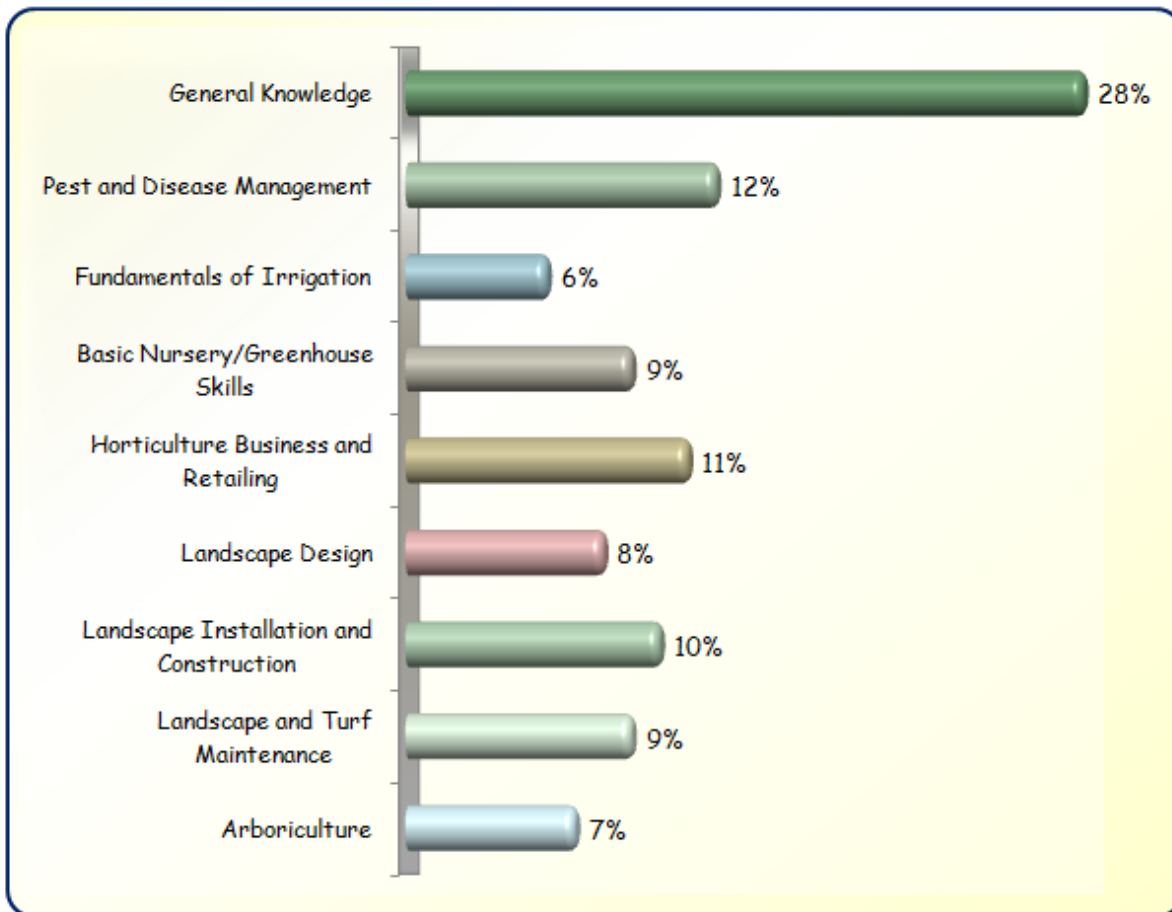
- Identify tree growth characteristics
- Explain treatment of tree disorders and injuries
- Explain proper pruning techniques

Written Assessment:

Administration Time: 3 hours

Number of Questions: 171

Areas Covered:



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



Performance Assessment:

Administration Time: 2 hours

Number of Jobs: 5

Areas Covered:

22% Identify and Control Pests

Inspection procedures, accuracy of identification, use of reference guide for pesticides, form completion, and time to complete Job 1.

18% Identify Equipment Features

4-cycle engine, 2-cycle engine, and time to complete Job 2.

24% Plant a Container-Grown Shrub

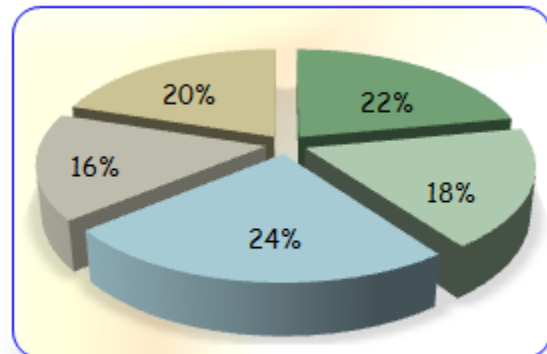
Procedures for digging hole, preparation of backfill, procedures for planting shrub and backfilling hole, clean-up of area, and time to complete Job 3.

16% Prune a Tree and an Evergreen Shrub

Identification of cuts to be made on tree and shrub, use of pruning shears and saw, quality of cut made with pruning shears and saw, and time to complete Job 4.

20% Stake out a Site-Plan—Entrance Walkway

Choice and use of measuring device, choice of color-coded or labeled plant stakes, layout of walkway and entrance landing, placement of plant stakes, sidewalk, and front entrance, and time to complete Job 5.



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.



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!

