

CENGAGE HORTICULTURE EXAM 1 PRACTICE (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://cengagehorticulture1.examzify.com>



Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	15

SAMPLE

Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

SAMPLE

1. _____ is not only pleasing to the eye, but it can be beneficial to wildlife as well.
- A. Snow cover
 - B. Water movement
 - C. Rock texture
 - D. Vertical elements
2. The major function of root hairs on roots is to
- A. Store starch
 - B. Anchor the plant
 - C. Absorb water and minerals from the soil
 - D. Photosynthesize
3. Which indicates a successful graft union has formed?
- A. The leaves of the scion change color.
 - B. The graft becomes completely independent of the rootstock immediately.
 - C. The cambial layers align and a callus bridge forms between scion and rootstock.
 - D. There is no evidence of growth at the graft site.
4. When constructing an outdoor room, trees are excellent materials for use in developing the outdoor ceiling, called a(n)
- A. Trellis
 - B. Pergola
 - C. Canopy
 - D. Arch
5. In plant nutrition, which statement best describes mobile nutrients?
- A. They stay in the tissues where they are placed.
 - B. Mobile nutrients move from old tissues to new ones.
 - C. They move from leaves to roots only.
 - D. They are never translocated.

6. What symptom is often caused by honeydew-producing pests like aphids and scales, visible as a black sooty mold?
- A. Powdery mildew on leaves.
 - B. Yellowing of leaves with necrotic spots.
 - C. Sooty mold on leaves.
 - D. Stunted growth with brittle stems.
7. In *Forsythia suspensa*, what is Forsythia?
- A. It is the genus
 - B. It is the species
 - C. It is the cultivar
 - D. It is the family
8. The word horticulture is derived from a Latin word meaning
- A. Plant propagation
 - B. Soil management
 - C. Garden cultivation
 - D. Flower arrangement
9. Postharvest physiology primarily informs decisions about which aspect?
- A. Shelf life and quality
 - B. Plant height
 - C. Soil moisture content
 - D. Seed germination timing
10. To raise soil pH and lower soil acidity, what is added to the soil?
- A. Sulfur
 - B. Gypsum
 - C. Compost
 - D. Lime

Answers

SAMPLE

1. B
2. C
3. C
4. C
5. B
6. C
7. A
8. C
9. A
10. D

SAMPLE

Explanations

SAMPLE

1. _____ is not only pleasing to the eye, but it can be beneficial to wildlife as well.

- A. Snow cover
- B. Water movement**
- C. Rock texture
- D. Vertical elements

Moving water is both attractive and ecologically valuable in landscapes. The movement oxygenates the water, supporting aquatic life such as insects, amphibians, and fish. That living community then provides food for a range of wildlife that visit the feature, including birds and small mammals. The flowing or splashing water also creates varied microhabitats—deep pools, shallow riffles, eddies—that offer shelter and foraging opportunities. The combination of visual appeal, sound, and real ecological benefit makes moving water stand out as a feature that pleases the eye and supports wildlife. Snow cover can be beautiful and offers insulation in winter, but it doesn't provide the same ongoing ecological interactions as moving water. Rock texture and vertical elements offer aesthetic value and some shelter or perching sites, but they don't deliver the broad habitat benefits that flowing water does.

2. The major function of root hairs on roots is to

- A. Store starch
- B. Anchor the plant
- C. Absorb water and minerals from the soil**
- D. Photosynthesize

Root hairs primarily increase the root's surface area so the plant can efficiently take up water and nutrients from the soil. These tiny extensions of epidermal cells reach into the moist soil solution, exposing more membrane to dissolved minerals and water. Water moves into the root by osmosis along a water potential gradient, and minerals enter via transport proteins that use energy to move ions into the cells. Starch storage happens in other root tissues, not in root hairs. While root hairs help the root system interact with the soil, anchoring is achieved by the overall structure of the roots rather than by the hairs themselves. Roots also don't photosynthesize because they are usually underground and lack chlorophyll-containing tissues. So the key role of root hairs is absorbing water and minerals from the soil.

3. Which indicates a successful graft union has formed?

- A. The leaves of the scion change color.
- B. The graft becomes completely independent of the rootstock immediately.
- C. The cambial layers align and a callus bridge forms between scion and rootstock.**
- D. There is no evidence of growth at the graft site.

The key idea is that a successful graft forms a continuous vascular connection between the scion and rootstock. When the cambial layers—the growth meristems just beneath the bark—are aligned, undifferentiated cells at the interface proliferate to create a bridge of callus tissue. Over time this callus differentiates into xylem and phloem, tying the two parts into one plant so water, minerals, and sugars can move freely between them. That cambial alignment with a callus bridge is the concrete signal that the graft union is establishing a functional bond. Other signs like leaves changing color, or the graft becoming completely independent immediately, or no growth at the graft site, do not indicate a successful union. Leaf color changes are more likely stress or nutrient issues; immediate independence means the connection never formed; and no growth at the graft site suggests failure to heal.

4. When constructing an outdoor room, trees are excellent materials for use in developing the outdoor ceiling, called a(n)

- A. Trellis
- B. Pergola
- C. Canopy**
- D. Arch

An outdoor room gains its sense of enclosure from an overhead cover, and trees provide a natural ceiling by forming a canopy. A canopy is the upper layer of leaves and branches that shade and enclose the space, creating a defined, comfortable environment beneath. This distinguishes it from a trellis, which is just a lattice framework used to support climbing plants; from a pergola, which is a freestanding structure with posts and an open roof that may offer shade but doesn't inherently provide a continuous leafy ceiling; and from an arch, which is a curved architectural element marking an opening rather than creating overhead cover. So the term that best fits a ceiling-like cover created by trees in an outdoor room is canopy.

5. In plant nutrition, which statement best describes mobile nutrients?

- A. They stay in the tissues where they are placed.
- B. Mobile nutrients move from old tissues to new ones.**
- C. They move from leaves to roots only.
- D. They are never translocated.

Mobile nutrients are those that can be remobilized within the plant from older, mature tissues to actively growing parts through the phloem. This ability to move allows the plant to reuse reserves as growth demands shift, so deficiency symptoms typically appear first in older leaves because the plant is pulling nutrients away from those tissues to support new growth. Examples include nitrogen, phosphorus, potassium, magnesium, and sulfur. In contrast, nutrients that stay put in the tissues where they were first deposited—like calcium—show deficiency in new, developing tissues. So the statement that best describes mobile nutrients is that they move from old tissues to new ones.

6. What symptom is often caused by honeydew-producing pests like aphids and scales, visible as a black sooty mold?

- A. Powdery mildew on leaves.
- B. Yellowing of leaves with necrotic spots.
- C. Sooty mold on leaves.**
- D. Stunted growth with brittle stems.

Sap-sucking pests like aphids and scales excrete honeydew, a sweet substance that coats leaf surfaces. A fungus then grows on that honeydew, producing a black, shiny film known as sooty mold. This mold is the visible symptom described, appearing as a dark coating on leaves. It can shade the leaf surface and reduce photosynthesis, weakening the plant, though the mold itself doesn't invade the leaf tissue. Because sooty mold relies on ongoing honeydew, removing the pests or washing the leaves can make the mold disappear once the source of honeydew is gone. The other options describe different problems: a white powdery coating is due to powdery mildew, not honeydew; yellowing with necrotic spots points to nutrient issues or other diseases; and stunted growth with brittle stems indicates environmental stress or structural problems, not honeydew-associated mold.

7. In *Forsythia suspensa*, what is *Forsythia*?

- A. It is the genus**
- B. It is the species
- C. It is the cultivar
- D. It is the family

*In a two-part scientific name, the first word designates the genus. In *Forsythia suspensa*, *Forsythia* is the genus, grouping this species with other *Forsythia* species. The second word, *suspensa*, is the species epithet that, together with the genus, identifies the specific species. Cultivar names are separate and usually appear in single quotes, not as part of the formal species name, and the family is a higher rank (Oleaceae for *Forsythia*) rather than the specific genus. So *Forsythia* is the genus.*

8. The word horticulture is derived from a Latin word meaning

- A. Plant propagation
- B. Soil management
- C. Garden cultivation**
- D. Flower arrangement

*The main idea here is the origin of the word. Horticulture comes from Latin roots *hortus*, meaning garden, and *cultura*, meaning cultivation or tending. Put together, it describes the cultivation or care of gardens. So the meaning is garden cultivation. While activities like propagating plants, managing soil, or arranging flowers are part of horticulture, they're specific practices within the broader idea of tending and growing plants in a garden setting.*

9. Postharvest physiology primarily informs decisions about which aspect?

- A. Shelf life and quality**
- B. Plant height
- C. Soil moisture content
- D. Seed germination timing

Postharvest physiology focuses on what happens to fruits and vegetables after harvest and how we manage those changes to keep them usable for as long as possible. It studies processes like respiration, moisture loss, ripening, color and texture changes, and spoilage, and shows how factors such as temperature, humidity, atmosphere, ethylene, and packaging influence these changes. Because these postharvest changes directly determine how long produce stays edible and how high the quality remains, this field mainly informs decisions about shelf life and quality—how long to store something, under what conditions, and what treatments help preserve its appealing attributes. Other choices relate to growth or preharvest decisions rather than postharvest handling: plant height is about plant development during growth, soil moisture concerns production practices, and seed germination timing concerns the early life stage of the plant.

10. To raise soil pH and lower soil acidity, what is added to the soil?

- A. Sulfur
- B. Gypsum
- C. Compost
- D. Lime**

Raising soil pH and reducing acidity is accomplished by adding lime. Lime, typically calcium carbonate or dolomitic lime, neutralizes the acidic hydrogen ions and exchangeable aluminum that keep soil pH low. This reaction gradually increases pH toward neutral and provides calcium (and magnesium with dolomitic lime), which also helps soil structure and root development. The effect is slow and depends on soil buffering, texture, and organic matter, so a soil test and follow-up applications are important. Sulfur lowers soil pH by forming sulfuric acid, so it's not used to raise pH. Gypsum supplies calcium and sulfur but doesn't significantly raise pH, though it can improve structure and salt-related problems in some soils. Compost can modestly affect pH through organic matter decomposition, but it isn't a reliable method for raising pH to neutral levels like lime is.

SAMPLE

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://cengagehorticulture1.examzify.com>

We wish you the very best on your exam journey. You've got this!

SAMPLE