

# Penn State Master Gardener Practice Exam (Sample)

## Study Guide



**Everything you need from our exam experts!**

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# 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

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- 1. Which statement about commercial wildflower seed mixtures is true?**
  - A. They may not be native to the region**
  - B. They are always native to the region**
  - C. They are guaranteed to be drought-tolerant**
  - D. They only contain perennials**
  
- 2. Plants which form flowers only when day length exceeds 12 hours**
  - A. Short-day**
  - B. Day-neutral**
  - C. Long-day**
  - D. Long-night**
  
- 3. Removal of a branch at its point of origin, where it attaches to the parent stem or a lateral side branch, is called:**
  - A. Heading back**
  - B. Rejuvenation**
  - C. Thinning**
  - D. Renewal pruning**
  
- 4. Which statement is consistent with seed storage guidance?**
  - A. Keep seeds in a cool, dry place**
  - B. Store seeds in a warm, humid location**
  - C. Keep seeds in direct sunlight**
  - D. Store seeds in a warm plastic bag**
  
- 5. Which crop would be most suitable to grow following tomatoes in a proper crop rotation system?**
  - A. Tomatoes**
  - B. Eggplant**
  - C. Corn**
  - D. Potatoes**

- 6. The principle tissues that moves water and minerals from roots to shoots is the:**
- A. Phloem**
  - B. Xylem**
  - C. Petiole**
  - D. Epidermis**
- 7. Pruning is done for the following reasons:**
- A. All of the above**
  - B. To improve the quality of the flowers or fruits of the plant**
  - C. To provide clearance for utilities**
  - D. To train recently planted plants**
- 8. Flowering annuals are plants that**
- A. re-bloom year after year**
  - B. usually cannot be grown from seed**
  - C. grow, flower, and produce seed in a single season**
  - D. should not be combined with spring-blooming bulbs**
- 9. Which seed-storage practice is recommended to maintain seed viability?**
- A. Keep Seeds In A Cold, Dry Place**
  - B. Maintain Temperatures Around 70°F**
  - C. Provide Low Humidity**
  - D. Place Paper Seed Packets In A Tightly Closed Container**
- 10. Roots have all the following functions except?**
- A. Anchor the plant in the soil**
  - B. Furnish physical support for the stem**
  - C. Store food**
  - D. Release water through stomata**

## Answers

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

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## **Explanations**

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1. Which statement about commercial wildflower seed mixtures is true?

- A. They may not be native to the region**
- B. They are always native to the region**
- C. They are guaranteed to be drought-tolerant**
- D. They only contain perennials**

Commercial wildflower seed mixtures are not guaranteed to be native because suppliers assemble blends from many sources to fit a broad market, and the components may come from regions outside your own. This means the mix can include species that are not native to your area, even though they help provide color, bloom time, and easy establishment. If you specifically want natives, look for mixes labeled as native to your region and check the species list to confirm which plants are included. Also, these mixes often contain a mix of annuals and perennials, and drought tolerance varies by species, so there isn't a universal guarantee on those traits.

2. Plants which form flowers only when day length exceeds 12 hours

- A. Short-day**
- B. Day-neutral**
- C. Long-day**
- D. Long-night**

The key idea is photoperiodism—the way flowering is driven by the length of day and night. Some plants need long days to bloom, while others flower as days shorten, and some flower regardless of day length. Here, flowering occurs only when daylight is longer than 12 hours, which fits the pattern of a long-day plant. In practical terms, as spring days lengthen past about 12 hours, these plants switch into bloom; when days are shorter, they stay vegetative. Short-day plants would bloom with shorter days, day-neutral plants don't care about day length, and long-night refers to a group that requires long nights to flower—not the case described here.

3. Removal of a branch at its point of origin, where it attaches to the parent stem or a lateral side branch, is called:

- A. Heading back**
- B. Rejuvenation**
- C. Thinning**
- D. Renewal pruning**

In pruning, thinning means removing a branch right at its point of origin, where it attaches to the main stem or a larger side limb. This approach preserves the overall structure of the plant while reducing density, which improves light penetration and air movement through the canopy and helps reduce the risk of disease. It's the opposite of heading back, which shortens a branch by cutting back to a bud or a lateral shoot rather than removing the branch at its base. It's also different from renewal or rejuvenation pruning, which involves more drastic reduction of size or older wood to stimulate new growth, rather than selectively removing a branch at its origin.

**4. Which statement is consistent with seed storage guidance?**

- A. Keep seeds in a cool, dry place**
- B. Store seeds in a warm, humid location**
- C. Keep seeds in direct sunlight**
- D. Store seeds in a warm plastic bag**

Seed viability depends on keeping moisture low and temperatures steady. Seeds stay alive longer when stored in a cool, dry environment, which slows deterioration and prevents mold or premature germination. Direct sunlight adds heat and light exposure that can degrade seeds, while a warm plastic bag traps moisture and warmth, creating a perfect conditions for mold and rot. So, the guidance that matches best is to store seeds in a cool, dry place, ideally in a sealed container with some desiccant to keep humidity down. For longer-term storage, you can refrigerate or even freeze seeds in airtight packaging, but the priority remains keeping moisture out and maintaining a cool, stable temperature.

**5. Which crop would be most suitable to grow following tomatoes in a proper crop rotation system?**

- A. Tomatoes**
- B. Eggplant**
- C. Corn**
- D. Potatoes**

Crop rotation helps interrupt pest and disease cycles and balances soil nutrients by alternating crops from different families. Tomatoes are in the nightshade family, so following them with another nightshade (eggplant or potatoes) would tend to carry over the same pests and diseases and keep similar nutrient demands. Corn comes from a different plant family with a distinct root system and nutrient needs, which helps break those pest and disease cycles and adds diverse organic matter to the soil. For these reasons, corn is the best crop to grow after tomatoes in a rotation.

**6. The principle tissues that moves water and minerals from roots to shoots is the:**

- A. Phloem**
- B. Xylem**
- C. Petiole**
- D. Epidermis**

Water and minerals move from roots to shoots through xylem, the tissue specialized for long-distance water transport. Xylem forms continuous tubes from the roots up through the stems into the leaves and is made of dead cells (tracheids and vessel elements) that create hollow conduits for water flow. The ascent is driven mainly by transpiration from the leaves, which generates a pull (cohesion-tension) that draws water upward; root pressure and capillary action can assist, especially at times of low transpiration. Minerals are taken up by the roots and loaded into the xylem with the water, so both water and dissolved minerals travel together upward. In contrast, phloem carries sugars and other organic nutrients, not the upward transport of water and minerals from roots. The petiole is simply the leaf stalk, and the epidermis is the outer protective tissue.

## 7. Pruning is done for the following reasons:

- A. All of the above**
- B. To improve the quality of the flowers or fruits of the plant**
- C. To provide clearance for utilities**
- D. To train recently planted plants**

Pruning serves multiple purposes to manage plant structure, health, and safety. When you prune to improve the quality of flowers or fruits, you remove weak or crowded growth and thin out excess wood. This opens the canopy to light and air, helping remaining buds develop more energy into desirable blooms or fruit, often resulting in better size, quality, and uniformity. Pruning to provide clearance for utilities is about safety and access. Removing growth that could reach or interfere with power lines, fences, or walkways reduces the risk of damage, outages, or hazards, and keeps maintenance and access unobstructed. Training recently planted plants focuses on establishing a strong framework. Early pruning shapes the plant's form, selects scaffolding branches, and directs growth to where it will be most productive and stable, helping the plant become well-structured as it matures. Since pruning can achieve all of these outcomes, the best choice reflects multiple valid purposes rather than a single, narrow reason.

## 8. Flowering annuals are plants that

- A. re-bloom year after year**
- B. usually cannot be grown from seed**
- C. grow, flower, and produce seed in a single season**
- D. should not be combined with spring-blooming bulbs**

Flowering annuals complete their life cycle in one growing season: they germinate, grow, flower, produce seeds, and then die. That's why the defining trait is that they grow, bloom, and set seed within a single season. Because of this life cycle, gardeners typically plant new generations each year for continuing color. In contrast, perennials survive to bloom again in later years, and some plants take two years to finish their life cycle, so their behavior isn't like annuals. Annuals can usually be grown from seed, so it isn't accurate to say they cannot be grown from seed. And planting annuals with spring-blooming bulbs is a common, flexible combination rather than a defining restriction.

## 9. Which seed-storage practice is recommended to maintain seed viability?

- A. Keep Seeds In A Cold, Dry Place**
- B. Maintain Temperatures Around 70°F**
- C. Provide Low Humidity**
- D. Place Paper Seed Packets In A Tightly Closed Container**

Seed viability hinges on keeping seeds dry. When seeds exchange moisture with their surroundings, their metabolic activity can creep back in and aging accelerates, while damp conditions invite mold and spoilage. Maintaining low humidity directly limits moisture uptake, helping seeds stay dormant and viable for longer. Temperature matters too—warmer storage (around 70°F) speeds aging, so it's not as favorable for long-term storage. Storing in paper packets inside a tightly closed container can trap moisture unless desiccants are used, which makes humidity control the more reliable factor. In short, controlling humidity is the most effective practice for preserving seed viability.

**10. Roots have all the following functions except?**

- A. Anchor the plant in the soil**
- B. Furnish physical support for the stem**
- C. Store food**
- D. Release water through stomata**

Roots mainly serve to anchor the plant in the soil, absorb water and minerals, and store food. Anchoring helps keep the plant upright and stable, especially in wind or on slopes, while absorption brings in the water and nutrients the shoots need. Some roots also store carbohydrates as a reserve. Stomata are tiny openings on above-ground organs like leaves and green stems that regulate gas exchange and water loss. Roots lack stomata, so they do not release water through stomata. Water moves from roots upward through the xylem to the aerial parts, but the loss of water via transpiration happens at the leaves, not at the roots. So, releasing water through stomata is not a function of roots.

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## 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](mailto:hello@examzify.com).**

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

**<https://pennstatemastergardener.examzify.com>**

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

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