

Agronomy Degree 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

- 1. How many 50-lb bags of wheat are needed to plant a 90-acre field at a rate of 1.5 bushels per acre?**
 - A. 162 bags**
 - B. 150 bags**
 - C. 170 bags**
 - D. 180 bags**

- 2. What term describes the process of exposing a plant to a cold period to initiate reproductive growth?**
 - A. Chilling**
 - B. Vernalization**
 - C. Scarification**
 - D. Stratification**

- 3. Which nutrient is essential for flowering and fruiting in plants?**
 - A. Nitrogen**
 - B. Phosphorus**
 - C. Potassium**
 - D. Magnesium**

- 4. What is the scientific name for cotton?**
 - A. Brassica napus**
 - B. Arachis hypogaea**
 - C. Gossypium hirsutum**
 - D. Zea mays**

- 5. Which pest management method utilizes physical means such as tillage and traps to manage pest populations?**
 - A. Biological pest management**
 - B. Cultural pest management**
 - C. Chemical pest management**
 - D. Mechanical pest management**

- 6. How is the quality of an agricultural lime material measured?**
- A. Guaranteed analysis**
 - B. County extension office**
 - C. Cation exchange capacity**
 - D. Effective calcium carbonate equivalent**
- 7. What organism is responsible for most plant diseases?**
- A. Bacteria**
 - B. Fungi**
 - C. Nematodes**
 - D. Virus**
- 8. Which of the following is an example of an organic fertilizer?**
- A. Dolomite**
 - B. Poultry litter**
 - C. Sodium nitrate**
 - D. Urea**
- 9. Oklahoma is the leading state in the USA for production of which crop?**
- A. Green mungbean**
 - B. Corn**
 - C. Wheat**
 - D. Cotton**
- 10. How many pounds of urea do you need to apply per acre to add 60 lbs of nitrogen?**
- A. 130.4 lbs**
 - B. 125 lbs**
 - C. 140 lbs**
 - D. 120 lbs**

Answers

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

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Explanations

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1. How many 50-lb bags of wheat are needed to plant a 90-acre field at a rate of 1.5 bushels per acre?

- A. 162 bags**
- B. 150 bags**
- C. 170 bags**
- D. 180 bags**

To determine how many 50-lb bags of wheat are needed to plant a 90-acre field at a rate of 1.5 bushels per acre, you first need to calculate the total amount of wheat required in bushels for the entire field. Start by multiplying the number of acres (90 acres) by the seeding rate (1.5 bushels per acre): $90 \text{ acres} \times 1.5 \text{ bushels/acre} = 135 \text{ bushels}$. Next, convert this amount into pounds, since the bags of wheat are measured in pounds. Knowing that there are 60 pounds in a bushel of wheat: $135 \text{ bushels} \times 60 \text{ lbs/bushel} = 8100 \text{ pounds}$ of wheat needed. Now, to find out how many 50-lb bags are required, divide the total pounds needed by the weight of each bag: $8100 \text{ pounds} \div 50 \text{ lbs/bag} = 162 \text{ bags}$. This calculation shows that the correct answer is 162 bags. The process involves multiplying the area by the seeding rate to find the total bushels required and then converting that figure into pounds, which is ultimately divided by the bag size to get the final count of bags needed for planting.

2. What term describes the process of exposing a plant to a cold period to initiate reproductive growth?

- A. Chilling**
- B. Vernalization**
- C. Scarification**
- D. Stratification**

Vernalization is the correct term for the process of exposing a plant to a prolonged cold period in order to promote flowering and reproductive growth. This phenomenon is critical for many plant species that require a specific chilling period to ensure successful flowering in the following growing season. During vernalization, the cold temperature induces physiological changes in the plant, enabling it to transition from a vegetative state to a reproductive state. Chilling typically refers to the cold temperatures that many plants need to endure but doesn't specifically denote the requirement for reproductive development. Scarification involves physically breaking dormancy in seeds, often by abrading the seed coat, while stratification refers to the process of subjecting seeds to a period of moist, cold conditions to simulate natural winter conditions, which helps in breaking seed dormancy. Neither scarification nor stratification directly addresses the cold exposure needed for inducing flowering, which clarifies why vernalization is the appropriate term in this context.

3. Which nutrient is essential for flowering and fruiting in plants?

- A. Nitrogen
- B. Phosphorus**
- C. Potassium
- D. Magnesium

Phosphorus is a key nutrient essential for flowering and fruiting in plants. It plays a critical role in the formation of DNA, RNA, and ATP (adenosine triphosphate), which are vital for energy transfer and genetic material in plants. Phosphorus is particularly important during the flowering stage, as it helps stimulate bud formation and flowering, leading to better fruit set and development. When phosphorus is adequately supplied, plants experience improved root development and stronger overall growth, which contributes to higher yields of flowers and fruit. In many cases, a deficiency in phosphorus can result in delayed flowering, reduced fruit quality, and lower overall harvests, emphasizing its necessity during these critical growth stages.

4. What is the scientific name for cotton?

- A. Brassica napus
- B. Arachis hypogaea
- C. Gossypium hirsutum**
- D. Zea mays

The scientific name for cotton is *Gossypium hirsutum*, which is the correct answer. This species is one of the most widely cultivated types of cotton and is primarily grown for its fiber, which is essential for the textile industry. *Gossypium hirsutum* is known for its high yield and adaptability to different growing conditions, making it a key species in global cotton production. The other options represent different plants: *Brassica napus* is known as rapeseed or canola, *Arachis hypogaea* refers to the peanut plant, and *Zea mays* is the scientific name for corn. Each of these plants has its own distinct uses and agricultural significance but does not relate to cotton. Understanding the correct botanical names is crucial in agronomy, allowing for accurate identification and study of various crops and their characteristics.

5. Which pest management method utilizes physical means such as tillage and traps to manage pest populations?

- A. Biological pest management**
- B. Cultural pest management**
- C. Chemical pest management**
- D. Mechanical pest management**

The method that utilizes physical means such as tillage and traps to manage pest populations is mechanical pest management. This approach focuses on directly disrupting pest life cycles or removing pests from the environment. Tillage can help control pests by disturbing their habitat and life cycle, while traps physically capture pests, reducing their numbers. In contrast, biological pest management involves using natural predators or parasites to control pest populations, which does not rely on physical tools or disruptions. Cultural pest management refers to practices such as crop rotation and planting schedules aimed at making the environment less hospitable to pests, rather than employing direct physical intervention. Chemical pest management, on the other hand, includes the use of pesticides and similar substances, which is fundamentally different from the physical methods characterizing mechanical pest management.

6. How is the quality of an agricultural lime material measured?

- A. Guaranteed analysis**
- B. County extension office**
- C. Cation exchange capacity**
- D. Effective calcium carbonate equivalent**

The quality of agricultural lime material is measured by its Effective Calcium Carbonate Equivalent (ECCE). This metric provides a standardized way to evaluate the liming ability of different agricultural limes based on their content of calcium and magnesium carbonates as well as other components that influence soil pH. A higher ECCE indicates a more effective liming material, meaning it will raise soil pH more effectively when applied, which is crucial for promoting healthy crop growth. In comparison, guaranteed analysis typically refers to the statement of the actual content of nutrients in fertilizers, making it less applicable for assessing lime quality. The county extension office serves as a resource for information and guidance, but it does not directly measure lime quality. Cation exchange capacity is a soil property that indicates the soil's ability to hold cations and is not specifically a measure of lime quality itself. Effective Calcium Carbonate Equivalent thus emerges as the most relevant and accurate measure for evaluating the quality of agricultural lime materials.

7. What organism is responsible for most plant diseases?

- A. Bacteria
- B. Fungi**
- C. Nematodes
- D. Virus

Fungi are responsible for most plant diseases due to their diverse range of species and their ability to infect various types of plants. They can cause diseases through different mechanisms, including creating mycelium that infiltrates plant tissue, releasing toxins, and producing spores that spread easily in the environment. The adaptability of fungi to various environmental conditions allows them to thrive in different ecosystems, making them significant pathogens in agriculture. Fungal diseases, such as rust, blight, and mildew, can lead to substantial crop losses and are often difficult to control. The ability of fungi to reproduce rapidly and form resistant structures, such as spores, further contributes to their capacity to persist in challenging conditions, leading to more severe outbreaks. While bacteria, nematodes, and viruses also contribute to plant diseases, their overall impact in terms of prevalence and the diversity of pathogens is less than that of fungi. This high incidence and the variety of diseases caused by fungi solidify their role as the most responsible organism for plant diseases.

8. Which of the following is an example of an organic fertilizer?

- A. Dolomite
- B. Poultry litter**
- C. Sodium nitrate
- D. Urea

Poultry litter is considered an organic fertilizer because it is a natural byproduct of poultry farming, consisting of a mixture of bird droppings, feathers, and bedding materials. It provides essential nutrients to plants, including nitrogen, phosphorus, and potassium, and is rich in organic matter, which helps improve soil structure, water retention, and microbial activity. Organic fertilizers like poultry litter not only supply nutrients but also contribute to the long-term fertility of the soil by enhancing its biological activity and nutrient-holding capacity. In contrast, dolomite is primarily a mineral-based soil amendment, sodium nitrate and urea are synthetic fertilizers that provide nutrients without organic matter, which is why they do not fit the definition of organic fertilizers. Understanding this differentiation is crucial for sustainable agricultural practices and soil health management.

9. Oklahoma is the leading state in the USA for production of which crop?

A. Green mungbean

B. Corn

C. Wheat

D. Cotton

Oklahoma is recognized as one of the leading states for wheat production, particularly hard red winter wheat, which thrives in the region due to its climate and soil conditions. The extensive cultivation of wheat is supported by the state's agriculture infrastructure and is a key contributor to its economy. While green mungbean is a crop grown in certain areas, it does not match the scale of wheat production in Oklahoma. Other crops, such as corn and cotton, may also be significant in various regions but do not lead in overall production compared to wheat in Oklahoma. Thus, understanding the types of crops that are predominantly cultivated in specific areas is important for recognizing agricultural trends and key outputs in different states.

10. How many pounds of urea do you need to apply per acre to add 60 lbs of nitrogen?

A. 130.4 lbs

B. 125 lbs

C. 140 lbs

D. 120 lbs

To determine how many pounds of urea are needed to provide 60 pounds of nitrogen per acre, it is essential to understand the composition of urea. Urea is a nitrogen-rich fertilizer containing about 46% nitrogen by weight. This means that in every 100 pounds of urea, there are 46 pounds of nitrogen. To calculate the amount of urea required to supply 60 pounds of nitrogen, you can set up the relationship as follows: 1. Establish the nitrogen content in urea: 46% nitrogen means for every 100 pounds of urea, you get 46 pounds of nitrogen. 2. To find out how much urea is needed for 60 pounds of nitrogen, you can set up a simple proportion: - Let x be the total pounds of urea needed. - Since 100 lbs of urea gives 46 lbs of nitrogen, the relationship is:
$$\frac{46 \text{ lbs N}}{100 \text{ lbs urea}} = \frac{60 \text{ lbs N}}{x \text{ lbs urea}}$$
 3. Solving for x , you can cross-multiply:
$$46x = 60 \times 100$$

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://agronomy-degree.examzify.com>

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