

Agronomy Degree Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

This is a sample study guide. To access the full version with hundreds of questions,

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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	6
Answers	9
Explanations	11
Next Steps	17

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. Don't worry about getting everything right, 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, and take breaks to retain information better.

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.

7. Use Other Tools

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!

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Questions

- 1. What feature makes hard red winter wheat flour ideal for specific baking purposes?**
 - A. Its protein content**
 - B. Its color**
 - C. Its grain size**
 - D. Its moisture level**
- 2. How many times will you need to fill a 2-ton fertilizer cart if you are applying 40 lbs of monoammonium phosphate per acre to a 120-acre field?**
 - A. 1 time**
 - B. 2 times**
 - C. 3 times**
 - D. 4 times**
- 3. Your wheat harvest from a 90-acre field yields a total of 3,948 bushels. What is the average yield per acre?**
 - A. 43.9 bushels per acre**
 - B. 45 bushels per acre**
 - C. 50 bushels per acre**
 - D. 40 bushels per acre**
- 4. Peanut pods are produced from which part of the plant?**
 - A. Flowers**
 - B. Leaves**
 - C. Roots**
 - D. Stems**
- 5. What is the primary characteristic of the harvest index?**
 - A. Amount of biomass produced**
 - B. Proportion of economic yield**
 - C. Quantity of live organic matter**
 - D. Measurement of soil particle size**

- 6. 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**
- 7. What element is required in large amounts by peanuts?**
- A. Calcium**
 - B. Iron**
 - C. Zinc**
 - D. Aluminum**
- 8. Which factor is NOT critical for seed germination?**
- A. Warmth**
 - B. Pressure**
 - C. Moisture**
 - D. Oxygen**
- 9. In which region are most peanuts grown in Oklahoma?**
- A. Eastern**
 - B. Southwestern**
 - C. Northeastern**
 - D. Panhandle**
- 10. What plant structure is most important for distinguishing wheat from rye, barley, and triticale in the vegetative stage?**
- A. Blade**
 - B. Leaf Sheath**
 - C. Auricle**
 - D. Ligule**

Answers

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

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Explanations

1. What feature makes hard red winter wheat flour ideal for specific baking purposes?

A. Its protein content

B. Its color

C. Its grain size

D. Its moisture level

The protein content of hard red winter wheat flour is a crucial feature that makes it particularly suitable for specific baking purposes, such as bread making. High protein levels in flour contribute to the formation of gluten, which is essential for providing structure and elasticity in baked goods. When water is added to the flour, the proteins (mainly glutenin and gliadin) hydrate and form gluten, which traps air and helps the dough rise during fermentation and baking. This characteristic is especially important for yeasted breads, which require a strong gluten network to support the dough's expansion and hold its shape. Furthermore, the specific protein content of hard red winter wheat flour typically ranges between 10-13%, which is optimal for producing strong, high-volume breads. Thus, its protein content not only defines its functionality in baking but also makes it a preferred choice for both commercial bakers and home cooks aiming for quality results in bread and other baked goods. In contrast, the other options, such as color, grain size, and moisture level, do not have the same direct impact on the flour's performance in baking. While these factors can influence aspects like aesthetics or shelf life, they do not fundamentally define the flour's suitability for creating high-quality bread.

2. How many times will you need to fill a 2-ton fertilizer cart if you are applying 40 lbs of monoammonium phosphate per acre to a 120-acre field?

A. 1 time

B. 2 times

C. 3 times

D. 4 times

To determine how many times you need to fill a 2-ton fertilizer cart when applying 40 pounds of monoammonium phosphate per acre to a 120-acre field, it's important to start by calculating the total amount of fertilizer needed for the entire field. First, calculate the total amount of monoammonium phosphate required: - The application rate is 40 pounds per acre. - The field size is 120 acres. Total fertilizer needed = 40 lbs/acre × 120 acres = 4800 lbs. Next, convert the total requirement into tons since the cart capacity is measured in tons: - There are 2000 pounds in a ton. To find out how many tons are needed: Total fertilizer needed in tons = 4800 lbs ÷ 2000 lbs/ton = 2.4 tons. Now, since the cart can hold 2 tons, you need to consider how many cart fills are necessary to apply 2.4 tons. Filling the cart once provides 2 tons, and you will need an additional 0.4 tons to reach the total required. However, once the cart is emptied, it cannot be filled to a fraction of its capacity for the second trip. Therefore, after the first

3. Your wheat harvest from a 90-acre field yields a total of 3,948 bushels. What is the average yield per acre?

A. 43.9 bushels per acre

B. 45 bushels per acre

C. 50 bushels per acre

D. 40 bushels per acre

To determine the average yield per acre, you need to divide the total yield from the field by the number of acres. In this case, the total yield is 3,948 bushels from a 90-acre field. The calculation is as follows: Average yield per acre = Total yield / Total acres Average yield per acre = 3,948 bushels / 90 acres Average yield per acre = 43.8667 bushels per acre When rounded to one decimal place, this results in an average yield of 43.9 bushels per acre. This calculation shows how to derive an average yield, which is an important aspect of agricultural metrics, helping farmers assess their productivity and make decisions for future planting. While the other choices present different numerical values, none align with the accurate calculation derived from the given data. Understanding how to perform these calculations is essential in agronomy, as it directly impacts yield management and resource allocation.

4. Peanut pods are produced from which part of the plant?

A. Flowers

B. Leaves

C. Roots

D. Stems

The production of peanut pods primarily occurs from the flowers of the peanut plant. When the flowers are fertilized, they form pegs that grow down into the soil, where they develop into the pods containing the peanuts. The flowers are the reproductive structures that facilitate this process, leading to the formation of the fruit. Leaves and stems play crucial roles in the overall growth and health of the plant, such as photosynthesis and structural support, but they do not produce the pods themselves. Additionally, the roots are instrumental in nutrient and water uptake and anchoring the plant, but they are not involved in pod formation. Understanding the role of flowers in peanut pod production is essential for comprehending various aspects of plant biology and crop production, especially in agronomy studies where reproductive development can significantly impact yield.

5. What is the primary characteristic of the harvest index?

- A. Amount of biomass produced**
- B. Proportion of economic yield**
- C. Quantity of live organic matter**
- D. Measurement of soil particle size**

The primary characteristic of the harvest index is the proportion of economic yield, which refers to the portion of the total biomass that is considered economically valuable, such as grain, fruit, or other marketable products. In agronomy, the harvest index is calculated by dividing the economic yield by the total biomass produced by a crop. This measurement is crucial because it provides insights into the efficiency of a crop in converting biomass into products that can be sold or used for human consumption, allowing farmers and agronomists to evaluate and compare the productivity and profitability of different crop varieties or farming practices. A higher harvest index indicates that more of the plant's biomass is contributing to the economic yield, which is a key goal in crop production.

6. 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:
$$46x = 60 \times 100$$

7. What element is required in large amounts by peanuts?

A. Calcium

B. Iron

C. Zinc

D. Aluminum

Peanuts require a significant amount of calcium for various physiological processes. Calcium plays a vital role in plant structure as it is a key component of cell walls, helping to maintain cell integrity and stability. It also acts as a signaling molecule in plant cells, impacting processes such as photosynthesis, nutrient transport, and enzyme activation. Additionally, adequate calcium levels help prevent disorders such as blossom end rot and other physiological issues associated with nutrient deficiencies in peanuts. While iron, zinc, and aluminum are important micronutrients for plant health, they are required in smaller quantities compared to calcium. Iron is crucial for chlorophyll synthesis and energy transfer during photosynthesis but does not play as vital a role in the structural aspects of peanuts as calcium does. Zinc is essential for enzyme function and growth regulation but is again needed in much lesser amounts. Aluminum, although it can influence soil properties and plant growth in certain conditions, is typically not a required nutrient for peanuts. Therefore, calcium stands out as the essential element needed in large quantities for optimal growth and development of peanuts.

8. Which factor is NOT critical for seed germination?

A. Warmth

B. Pressure

C. Moisture

D. Oxygen

For seed germination, the essential conditions include warmth, moisture, and oxygen. These elements work together to initiate the metabolic processes necessary for a seed to sprout and grow into a plant. Warmth activates enzymes that facilitate the growth of the seed, making it more responsive to the presence of moisture and oxygen. Moisture is crucial, as it helps soften the seed coat and allows the seed to imbibe water, an essential process for germination. Oxygen is vital for respiration; seeds require it to convert starches and reserves into the energy needed for germination and growth. Pressure is not typically recognized as a critical factor for seed germination. While certain situations may involve physical pressure due to soil compaction or other environmental factors, these do not directly influence the fundamental biological processes required for a seed to germinate. Thus, pressure is the factor that is not critical for seed germination.

9. In which region are most peanuts grown in Oklahoma?

- A. Eastern
- B. Southwestern**
- C. Northeastern
- D. Panhandle

The southwestern region of Oklahoma is the primary area for peanut cultivation, largely due to its warm climate and well-drained sandy loam soils, which are ideal for peanut production. This region receives adequate sunlight and has sufficient temperatures that favor the growth of peanuts, which are sensitive to frost. In contrast, the eastern and northeastern regions of Oklahoma typically experience more humidity and varying soil types, which are not as conducive for peanut farming. The panhandle, being primarily dry and less fertile for such crops, also lacks the ideal conditions needed for growing peanuts effectively. Consequently, the southwestern region stands out as the most productive area for peanut agriculture in Oklahoma.

10. What plant structure is most important for distinguishing wheat from rye, barley, and triticale in the vegetative stage?

- A. Blade
- B. Leaf Sheath
- C. Auricle**
- D. Ligule

The auricle is a critical plant structure for distinguishing wheat from rye, barley, and triticale during the vegetative stage. Auricles are small, ear-like appendages located at the base of the leaf blade where it attaches to the leaf sheath. In wheat, the auricles are typically more prominent and well-defined compared to other grains. This distinguishing feature helps agronomists and farmers quickly identify the species in the field. While other structures such as the blade, leaf sheath, and ligule play a role in the overall morphology of grasses, they often do not provide the same level of specificity for differentiating wheat from its close relatives. The blade and leaf sheath can appear fairly similar among the different types, and while the ligule also varies, it is the auricle's shape and presence that serve as a more reliable characteristic for this identification purpose in the vegetative stage.

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!