

IOWA DOA CORE PESTICIDE APPLICATOR'S LICENSE PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. A sprayer has a 320-gallon capacity tank. If it is calibrated to apply 16 gallons of solution per acre, how many acres will be sprayed with each fill?
 - A. 16
 - B. 20
 - C. 30
 - D. 36
2. One step to reduce the movement of particles off the application site is to use _____.
 - A. a higher sprayer pressure
 - B. nozzles with smaller spray angles
 - C. a nozzle screen with a check valve
 - D. nozzles producing larger spray droplets
3. How many times must pressure rinsed pesticide containers be rinsed?
 - A. Three times
 - B. Once
 - C. Twice
 - D. Four times
4. Which statement best describes integrated pest management (IPM) strategies?
 - A. Pesticides are not included in an IPM strategy
 - B. Non-chemical methods usually provide only short-term control
 - C. IPM uses a combination of control methods to manage pests
 - D. Control measures should be implemented on a calendar-basis
5. Which nozzle situation minimizes the potential for pesticide drift?
 - A. Small orifices at low pressure
 - B. Small orifices at high pressure
 - C. Large orifices at low pressure
 - D. Large orifices at high pressure

- 6. If a sprayer applies 15 gallons per acre, how many gallons per 1000 square feet is that?**
- A. 0.23 gallons
 - B. 0.34 gallons
 - C. 0.50 gallons
 - D. 0.75 gallons
- 7. Which term describes the downward movement of pesticide through soil and into groundwater?**
- A. Drift
 - B. Leaching
 - C. Runoff
 - D. Volatilization
- 8. You are spraying a corn field for stalk borers along the field edge with 3 pints per acre, treating only the outside eight rows on 30-inch rows, for a strip one mile long. How many pints of insecticide are required?**
- A. 3.75 pints
 - B. 5 pints
 - C. 7.25 pints
 - D. 12.5 pints
- 9. A pesticide label calls for a broadcast application using 2 pints of product per acre. Your sprayer holds 375 gallons and is calibrated to apply 15 gallons of spray mixture per acre. How much product is needed for each fill?**
- A. 25 pints
 - B. 30 pints
 - C. 50 pints
 - D. 75 pints
- 10. Which is a disadvantage of an emulsifiable concentrate?**
- A. Inhalation hazards are high, especially when pouring and mixing
 - B. Solvents in the formulation may cause pump parts to deteriorate
 - C. It tends to clog nozzles and screens in sprayer equipment
 - D. Specialized equipment is needed to apply EC products

Answers

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

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Explanations

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1. A sprayer has a 320-gallon capacity tank. If it is calibrated to apply 16 gallons of solution per acre, how many acres will be sprayed with each fill?

- A. 16
- B. 20**
- C. 30
- D. 36

This question tests how to convert a rate per acre into the total area covered by a full tank. If the sprayer holds 320 gallons and applies 16 gallons for each acre, divide the tank capacity by the per-acre rate: $320 \div 16 = 20$. This works because $20 \text{ acres} \times 16 \text{ gallons per acre}$ equals 320 gallons exactly. The other numbers would require more gallons than the tank holds (for example, 30 acres would need 480 gallons, 36 acres would need 576 gallons). So a full tank sprays 20 acres.

2. One step to reduce the movement of particles off the application site is to use _____.

- A. a higher sprayer pressure
- B. nozzles with smaller spray angles
- C. a nozzle screen with a check valve
- D. nozzles producing larger spray droplets**

Droplet size is the key factor in drift control. Using nozzles that produce larger spray droplets reduces the movement of particles off the application site because heavier droplets have a greater tendency to settle quickly and are less easily carried by wind. Finer droplets stay suspended longer and can travel far beyond the target, increasing off-site movement. So, opting for larger droplets directly tackles drift by increasing the drop size and settling speed. Higher pressure tends to produce smaller droplets and can actually increase drift, while spray-angle adjustments or a nozzle screen with a valve don't address drift as effectively. Keep in mind this trade-off with coverage, but for reducing off-target movement, larger droplets are the best single step.

3. How many times must pressure rinsed pesticide containers be rinsed?

- A. Three times**
- B. Once
- C. Twice
- D. Four times

Removing pesticide residues from containers is essential to prevent exposure and environmental contamination, and rinsing them multiple times is the standard safety practice. Pressure rinsing helps loosen residue quickly, but it doesn't replace the required rinsing steps. Typically, you perform three rinses: after the container is emptied, fill it with clean water, shake or swirl to loosen residues, then drain; repeat this two more times. Completing three rinses greatly reduces what remains inside, making disposal or recycling safer. The rinse water contains pesticide and must be handled according to label directions and local regulations.

4. Which statement best describes integrated pest management (IPM) strategies?

- A. Pesticides are not included in an IPM strategy
- B. Non-chemical methods usually provide only short-term control
- C. IPM uses a combination of control methods to manage pests**
- D. Control measures should be implemented on a calendar-basis

Integrated pest management relies on combining different control methods—cultural, mechanical, biological, and selective chemical options—guided by monitoring and action thresholds rather than a fixed schedule. The best statement captures this by saying IPM uses a combination of control methods to manage pests, aiming to reduce risks and resistance while keeping crops productive. Pesticides aren't excluded from IPM; they may be used when pest levels reach action thresholds and in ways that minimize risks and delay resistance. Non-chemical methods can contribute to long-term suppression when integrated with monitoring and timely decisions, not just provide short-term control. And actions aren't based on a calendar; they're taken when pest populations warrant intervention according to observed levels and thresholds.

5. Which nozzle situation minimizes the potential for pesticide drift?

- A. Small orifices at low pressure
- B. Small orifices at high pressure
- C. Large orifices at low pressure**
- D. Large orifices at high pressure

Drift is minimized when droplets are large and exit with less energy. A large nozzle orifice produces bigger droplets, and operating at low pressure reduces atomization and the spray's exit velocity. Together, this yields heavier droplets that are less likely to be carried off-target by wind, so drift is reduced. In contrast, small orifices at high pressure create many fine droplets that stay airborne longer and can travel with the breeze, increasing drift.

6. If a sprayer applies 15 gallons per acre, how many gallons per 1000 square feet is that?

- A. 0.23 gallons
- B. 0.34 gallons**
- C. 0.50 gallons
- D. 0.75 gallons

Converting a spray rate from gallons per acre to gallons per 1,000 square feet. Since 1 acre equals 43,560 square feet, the rate per square foot is $15 \div 43,560 \approx 0.0003448$ gallons per square foot. Multiply by 1,000 square feet to get gallons per 1,000 square feet: $0.0003448 \times 1,000 \approx 0.3448$ gallons. Rounding, that's about 0.34 gallons per 1,000 square feet.

7. Which term describes the downward movement of pesticide through soil and into groundwater?

- A. Drift
- B. Leaching**
- C. Runoff
- D. Volatilization

Leaching is the downward movement of pesticide with water through soil toward groundwater. When a pesticide is soluble or not strongly bound to soil particles, rainwater or irrigation can carry it down through the soil profile and potentially reach the water table. This distinguishes it from drift, which is air movement of pesticide during or after application; runoff, which is water moving across the surface carrying pesticides away; and volatilization, which is the pesticide turning into vapor and moving into the air. Leaching is more likely in sandy, low-organic-matter soils and under heavy rainfall or irrigation, especially for highly soluble pesticides. To reduce leaching risk, choose products with lower leaching potential, apply under appropriate conditions to avoid heavy rainfall, and manage soil properties to increase sorption, such as maintaining organic matter.

8. You are spraying a corn field for stalk borers along the field edge with 3 pints per acre, treating only the outside eight rows on 30-inch rows, for a strip one mile long. How many pints of insecticide are required?

- A. 3.75 pints
- B. 5 pints
- C. 7.25 pints**
- D. 12.5 pints

You're calculating how much insecticide is needed based on the area treated, since the rate is expressed per acre. First find the strip width: eight rows at 30 inches apart gives $8 \times 30 = 240$ inches, which is 20 feet. The strip length is one mile, which is 5280 feet. So the area treated is $20 \text{ ft} \times 5280 \text{ ft} = 105,600$ square feet. Convert to acres: 1 acre = 43,560 square feet, so treated acres = $105,600 / 43,560 \approx 2.424$ acres. Apply the rate: 3 pints per acre $\times 2.424$ acres ≈ 7.272 pints. The option that best matches this calculation is about 7.25 pints.

9. A pesticide label calls for a broadcast application using 2 pints of product per acre. Your sprayer holds 375 gallons and is calibrated to apply 15 gallons of spray mixture per acre. How much product is needed for each fill?

- A. 25 pints**
- B. 30 pints
- C. 50 pints
- D. 75 pints

Think about how much product you need based on how many acres you can treat with one full tank of spray. The sprayer holds 375 gallons and is calibrated to apply 15 gallons per acre. So one full fill covers $375 \div 15 = 25$ acres. With a label rate of 2 pints of product per acre, the total product for 25 acres is $25 \times 2 = 50$ pints. So, for each full tank fill, you'd need 50 pints of product (which is 25 quarts).

10. Which is a disadvantage of an emulsifiable concentrate?

- A. Inhalation hazards are high, especially when pouring and mixing
- B. Solvents in the formulation may cause pump parts to deteriorate**
- C. It tends to clog nozzles and screens in sprayer equipment
- D. Specialized equipment is needed to apply EC products

Emulsifiable concentrates use organic solvents to dissolve the active ingredient so the product can form an emulsion when mixed with water. Those solvents can attack and soften or dissolve pump seals, hoses, and other rubber or plastic parts inside the sprayer. Over time, this solvent exposure wears down equipment, leading to leaks or pump failure, which is the core drawback you're weighing with EC formulations. Other options are less central to ECs: inhalation hazards can be a factor with many solvent-based products during pouring or mixing, but it's not as specific a drawback as equipment damage. Nozzle and screen clogging isn't a primary issue for ECs, since they're liquids designed to pass through standard spray systems, and specialized equipment isn't usually required.

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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.

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

<https://coreiowadoapesticideapp.examzify.com>

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

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