MIXED PAES 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.

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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!

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Questions

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1. What is a grain dryer?

A. Device for removing excess moisture from the grain, generally by forced or natural convection.

B. Direct-fired dryer.

C. Indirect-fired dryer.

D. Cross-flow type dryer.

2. What is the minimum heating system efficiency for a biomass furnace?

A. 30%

B. 50%

C. 60%

D. 70%

3. Corn grits have a minimum particle size not less than which measurement?

A. 0.75 mm

B. 0.86 mm

C. 1.0 mm

D. 1.2 mm

4. What connects the pump handle to the plunger assembly within the cylinder?

A. Crank handle

B. Pump rod/plunger rod

C. Tie rod

D. Sump rod

5. What is the overhead valve (OHV) configuration?

A. I-head arrangement of valves wherein the intake and exhaust valves are located in the cylinder head.

B. Valve arrangement in cylinder block.

C. Valves located in the cylinder head but not I-head.

D. Pushrod-less engine design.

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6. Which statement describes the soil-additive applicator?

A. It applies soil additives by means of tillage.

B. It spreads fertilizer across the field.

C. ItCultivates between rows.

D. It applies, and incorporates soil additives by tillage.

7. Which biomass furnace type heats ambient air for drying in a dry-type indirect-fired configuration?

A. Wet type biomass furnace

B. Direct-fired biomass furnace

C. Dry type biomass furnace indirect-fired

D. Fluidized-bed biomass furnace

8. Which engine cycle includes the stages intake, compression, power, and exhaust?

A. Two-stroke cycle.

B. Diesel cycle.

C. Four-stroke cycle.

D. Otto cycle.

9. What is the minimum threshing efficiency for the mechanical rice thresher according to PAES 204V2000?

A. 99.5%

B. 99.9%

C. 99.8%

D. 99.0%

10. What is the maximum net cracked grain percentage allowed for a mechanical rice thresher?

A. 5%

B. 4%

C. 3%

D. 2%

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Answers

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

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Explanations

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1. What is a grain dryer?

A. Device for removing excess moisture from the grain, generally by forced or natural convection.

B. Direct-fired dryer.

C. Indirect-fired dryer.

D. Cross-flow type dryer.

A grain dryer is a machine that removes moisture from grain so it can be stored safely, typically by moving hot air through or across the grain to evaporate water. The cross-flow type dryer is a specific design of this device where the drying air flows across the grain bed. This airflow arrangement helps remove moisture efficiently and promotes more uniform drying, because the air contacts the grain from the side and passes through the bed rather than moving straight along it. While other terms describe how heat is generated (direct-fired or indirect-fired), they don't define the device itself. Among the options, naming the cross-flow type highlights a concrete grain-dryer design, making it the best answer.

2. What is the minimum heating system efficiency for a biomass furnace?

A. 30%

B. 50%

C. 60%

D. 70%

AFUE, the annual fuel utilization efficiency, is the measure of how much energy in the biomass fuel actually becomes usable heat in the home. For a biomass furnace, the minimum acceptable AFUE is 50%, meaning at least half the energy in the fuel is converted into heat rather than lost. This threshold ensures a reasonable level of efficiency while recognizing the nature of biomass combustion. Modern biomass furnaces often exceed this, reaching 60% or more with better combustion control and heat exchange, but 50% is the minimum widely recognized standard. So the minimum efficiency is 50%.

3. Corn grits have a minimum particle size not less than which measurement?

A. 0.75 mm

B. 0.86 mm

C. 1.0 mm

D. 1.2 mm

Particle size distribution matters because it directly shapes the texture and cooking behavior of corn grits. A defined minimum particle size keeps the product from becoming too fine, preserving a characteristic gritty bite and predictable hydration during cooking. The specified threshold is 0.86 millimeters. That means any particles smaller than that would not meet the standard. This particular value aligns with how grits are classified and produced to maintain a consistent coarse texture and cooking performance. If the minimum were set higher, the product would be coarser and potentially harder to cook evenly; if it were set lower, finer particles could slip in, producing a softer, meal-like texture and shorter cooking times. The 0.86 mm limit is chosen to sustain the desired grit texture and standardize quality across batches.

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4. What connects the pump handle to the plunger assembly within the cylinder?

A. Crank handle

B. Pump rod/plunger rod

C. Tie rod

D. Sump rod

The thing that links the handle to the moving plunger inside the cylinder is the pump rod (or plunger rod). This rod is the linkage that connects the rotating crank or handle to the plunger, turning the handle's circular motion into the straight-line, up-and-down motion of the plunger within the cylinder. Without this rod, turning the handle wouldn't move the plunger at all. The crank handle is the part you grasp and rotate, but it's the pump rod that transmits that motion to the plunger. A tie rod mainly provides structural alignment and support, not the actuation itself, and a sump rod isn't a standard part in this mechanism.

5. What is the overhead valve (OHV) configuration?

A. I-head arrangement of valves wherein the intake and exhaust valves are located in the cylinder head.

B. Valve arrangement in cylinder block.

C. Valves located in the cylinder head but not I-head.

D. Pushrod-less engine design.

Overhead valve (OHV) means the valves sit in the cylinder head (above the piston) and are operated by pushrods and rocker arms from a camshaft located in the engine block. The description calling it an I-head arrangement—both intake and exhaust valves located in the cylinder head—fits OHV engines perfectly, since the valves are indeed in the head even though the cam is in the block and uses pushrods to actuate them. The other descriptions describe different layouts: valves in the block describe a flathead/L-head setup; valves in the head but not in the I-head form isn't a standard OHV description; and a pushrod-less design points to overhead-cam configurations.

6. Which statement describes the soil-additive applicator?

A. It applies soil additives by means of tillage.

B. It spreads fertilizer across the field.

C. ItCultivates between rows.

D. It applies, and incorporates soil additives by tillage.

The main idea is that a soil-additive applicator both places additives in the field and mixes them into the soil during tillage. The best statement captures both actions—applying the additives and incorporating them by tillage—because that combination reflects how these machines operate to place materials like lime or gypsum and then blend them into the soil for uniform distribution and reduced surface losses. Why this fits: it describes the dual function of applying the additive and then tilling it into the soil in one pass, which is exactly what a soil-additive applicator is designed to do. The other descriptions miss an essential part: one focuses only on applying through tillage without mixing, another talks about spreading fertilizer in general without incorporation, and another refers to cultivating between rows, which is a different operation.

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7. Which biomass furnace type heats ambient air for drying in a dry-type indirect-fired configuration?

A. Wet type biomass furnace

B. Direct-fired biomass furnace

C. Dry type biomass furnace indirect-fired

D. Fluidized-bed biomass furnace

When you want to heat ambient air for drying without letting combustion gases contaminate the air, use heating that transfers heat through a separate surface rather than directly burning into the air stream. In a dry-type indirect-fired biomass furnace, the combustion heat is captured by a heat exchanger and that heat is then transferred to the ambient air that will be used for the dryer. The drying air is heated cleanly and remains separate from the combustion products, giving you controlled, consistent drying conditions and reduced contaminants. This setup is specifically described as dry-type indirect-fired because the air is heated indirectly, not by direct contact with flames. The other options either involve moisture in the fuel, direct contact between combustion gases and the drying air, or a different combustion technology that doesn't match the indirect heating of process air. So the correct type for heating ambient air in this indirect-fired drying configuration is the dry-type biomass furnace that is indirect-fired.

8. Which engine cycle includes the stages intake, compression, power, and exhaust?

A. Two-stroke cycle.

B. Diesel cycle.

C. Four-stroke cycle.

D. Otto cycle.

This question tests understanding of how an internal combustion engine completes a full cycle through four distinct piston movements. In a four-stroke engine, each complete cycle is divided into four stages: intake, where air or air-fuel enters the cylinder; compression, where the charge is squashed for a higher temperature; power, where ignition or combustion expands the gas and pushes the piston to do work; and exhaust, where burned gases are expelled. This exact sequence is what defines the four-stroke cycle. Two-stroke engines mix some of these actions into fewer strokes, so they don't have separate intake and exhaust strokes. The Otto and Diesel cycles are thermodynamic models that describe how heat and work are exchanged in engines, and they're often discussed in the context of four-stroke engines, but the wording of the question refers to the mechanical sequence, which aligns with the four-stroke cycle.

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9. What is the minimum threshing efficiency for the mechanical rice thresher according to PAES 204V2000?

A. 99.5%

B. 99.9%

C. 99.8%

D. 99.0%

Threshing efficiency is a measure of how effectively a threshing machine separates edible grain from the straw and husk during processing. In PAES 204V2000, this performance metric is set as a minimum standard to ensure machines recover nearly all the grain and minimize losses or damage during threshing. The reason 99.8% is the best answer is that PAES 204V2000 specifies 99.8% as the minimum threshing efficiency for mechanical rice threshers. This means that, in testing, at least 99.8% of the grain present after threshing must be recovered as usable rice. It reflects a high target that balances achievable performance with quality, ensuring machines keep losses very low. Understanding what this means in practice helps: a threshing test would start with a known amount of grain, run it through the machine, and then measure how much grain is recovered versus what was fed in. Values at or above 99.8% meet the standard, while lower values fall short of the requirement. The other options don't meet the defined minimum. One is stricter than the standard (higher than the minimum) and would set a tougher requirement, while the others are lower than what the standard mandates, making them insufficient as the minimum threshold.

10. What is the maximum net cracked grain percentage allowed for a mechanical rice thresher?

A. 5%

B. 4%

C. 3%

D. 2%

In threshing, keeping grain quality involves limiting damage to kernels while still allowing for practical processing. The rule sets a tolerance for cracked grains to reflect that some breakage happens during mechanical threshing, but the product must stay within marketable quality. Five percent is the standard maximum net cracked grain allowed, balancing acceptable damage with realistic operation. Exceeding this level would push grain into lower grades and reduce value, while lower percentages would be unnecessarily strict for typical use. If cracking trends upward toward the limit, you'd look at adjusting operating settings—cylinder speed, concave clearance, and feeding rate—to reduce damage.

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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:

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

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