ASHRAE 62.1 Standards and Air Systems Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

Table of Contents

Copyright **1**

Table of Contents **2**

Introduction **3**

How to Use This Guide **4**

Questions **5**

Answers **8**

Explanations **10**

Next Steps **16**

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. What is the goal of the Indoor Air Quality Procedure (IAQP) in ASHRAE 62.1?

A. To minimize energy use

B. To ensure acceptable indoor air quality by controlling contaminants and providing adequate ventilation.

C. To maximize outdoor air delivery for all spaces

D. To meet thermal comfort only

2. What does compliance documentation entail under ASHRAE 62.1?

A. A short note on site showing a diagram.

B. A signed letter from occupants about comfort.

C. Documentation that demonstrates adherence to 62.1, including calculations, schedules, and verification results.

D. An annual energy bill.

3. How is the breathing zone best described?

A. The region around a person's mouth and nose where inhaled air is drawn.

B. The entire room volume.

C. The outdoor air intake location.

D. The ductwork near the supply diffusers.

4. Which term describes measuring and adjusting airflow to meet design criteria?

A. Testing and balancing

B. Commissioning

C. IAQP

D. DCV

5. Which statement best describes the operation of a dual-duct system?

A. It uses a single duct for all zones.

B. It provides independent supply and return air paths for multiple zones.

C. It has no reheat.

D. It relies solely on outdoor air for cooling.

6. Under ASHRAE 62.1-2022, what determines filtration requirements for outdoor air?

- **A. Filtration is always required at MERV 13 regardless of air quality.**
- **B. Filtration requirements apply if particulate matter exceeds national standards.**
- **C. Filtration is never required.**
- **D. Filtration requirements depend on user preference.**

7. What does the term 'reheat' refer to in HVAC systems?

- **A. The process of removing heat from air to cool a space.**
- **B. The process of mixing return air with outside air.**
- **C. The process of adding heat to air to maintain desired temperature.**
- **D. The process of increasing humidity in air.**

8. In humidification calculations, the typical infiltration load is usually considered under which condition?

- **A. When the outdoor humidity is high.**
- **B. When the ventilation rate is zero.**
- **C. When indoor humidity is at the setpoint.**
- **D. When the air is isothermal.**

9. How does 62.1 address particulate matter?

- **A. PM is not addressed by 62.1.**
- **B. PM is addressed only by filtration in 62.1.**
- **C. PM is addressed via filtration and ventilation strategies to limit exposure in the breathing zone.**
- **D. PM is controlled solely by outdoor air dilution.**

10. What is commissioning in the context of 62.1?

- **A. The process of installing equipment**
- **B. A process to verify that the installed ventilation system operates as designed and delivers required IAQ**
- **C. The occupant comfort survey**
- **D. The routine maintenance schedule**

Answers

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

Explanations

1. What is the goal of the Indoor Air Quality Procedure (IAQP) in ASHRAE 62.1?

A. To minimize energy use

B. To ensure acceptable indoor air quality by controlling contaminants and providing adequate ventilation.

C. To maximize outdoor air delivery for all spaces

D. To meet thermal comfort only

The Intent of the IAQP is to ensure acceptable indoor air quality by controlling contaminants at the source and providing adequate ventilation to dilute and remove those contaminants. This performance-based approach sits alongside the prescriptive ventilation requirements, offering a way to meet IAQ targets by focusing on where pollutants come from and how air is brought in and filtered, rather than simply chasing higher outdoor-air flow or just aiming for energy savings. Energy considerations can influence design, but the primary goal is IAQ—keeping contaminant levels within acceptable limits for occupants. The other options miss this IAQ-focused objective: energy minimization, universally maximizing outdoor air, or only achieving thermal comfort do not capture the purpose of IAQP.

2. What does compliance documentation entail under ASHRAE 62.1?

A. A short note on site showing a diagram.

B. A signed letter from occupants about comfort.

C. Documentation that demonstrates adherence to 62.1, including calculations, schedules, and verification results.

D. An annual energy bill.

Compliance documentation for ASHRAE 62.1 is the set of records that proves the building's ventilation and IAQ design meets the standard. It includes calculations showing outdoor air requirements for each space or zone, schedules or summaries of the ventilation rates and supply quantities, and verification results from testing, balancing, and commissioning that confirm the system actually delivers those rates. It may also cover equipment data, control sequences, and system descriptions that connect the design to how the system operates in practice. An annual energy bill doesn't demonstrate IAQ compliance, since energy use isn't a measure of whether the required outdoor air, filtration, and related provisions meet 62.1. Similarly, a brief note or a comfort signature from occupants isn't a verified record of the system's performance. A full set of calculations, schedules, and verification results best describes compliance with the standard.

3. How is the breathing zone best described?

A. The region around a person's mouth and nose where inhaled air is drawn.

B. The entire room volume.

C. The outdoor air intake location.

D. The ductwork near the supply diffusers.

The breath zone is the air right around a person's face—the region from which inhaled air is drawn. It's the part of the room air that actually enters the lungs, so it's the focus for evaluating occupants' exposure to contaminants. That's why this description best fits the breathing zone: it centers on the air the person breathes, not the entire room, not external air intake locations, and not the ductwork itself, which are parts of the delivery system rather than the air the occupant inhales.

4. Which term describes measuring and adjusting airflow to meet design criteria?

A. Testing and balancing

B. Commissioning

C. IAQP

D. DCV

The term for measuring and adjusting airflow to meet design criteria is Testing and Balancing. In this process, technicians measure actual airflows at supply diffusers, grilles, and returns, compare them to the design values, and adjust dampers, VAV boxes, and other control devices to bring the system into tolerance. This ensures the space receives the intended ventilation rates and air distribution for comfort and energy performance. Commissioning is broader, covering overall verification of system performance and operations, with Testing and Balancing as a key step. IAQP focuses on strategies to achieve IAQ, not the balancing of airflow, and DCV is a control strategy that modulates airflow based on occupancy or sensors rather than the measurement-and-adjustment activity itself.

5. Which statement best describes the operation of a dual-duct system?

A. It uses a single duct for all zones.

B. It provides independent supply and return air paths for multiple zones.

C. It has no reheat.

D. It relies solely on outdoor air for cooling.

Dual-duct systems control space temperature by supplying two separate streams of air: one heated and one cooled. Each zone gets a blend of these two supply streams through zone dampers, allowing independent temperature control for multiple areas. The key feature is the two independent supply paths, which is why this option is the best description. In practice, the return air path is typically shared back to the air handler, not independently routed per zone. The other ideas don't fit because a dual-duct system is not about a single supply duct, it isn't defined by absence of reheat (which some installations may have), and it isn't driven solely by outdoor air for cooling.

6. Under ASHRAE 62.1-2022, what determines filtration requirements for outdoor air?

A. Filtration is always required at MERV 13 regardless of air quality.

B. Filtration requirements apply if particulate matter exceeds national standards.

C. Filtration is never required.

D. Filtration requirements depend on user preference.

Outdoor air filtration requirements in ASHRAE 62.1-2022 are driven by the quality of the outdoor air. When particulate matter in the outdoor air exceeds national standards, the standard requires filtration to be applied to the incoming outdoor air to reduce pollutant levels before it enters the breathing zone. This helps protect occupants from outdoor-origin pollutants even as ventilation continues. If outdoor air quality meets or is better than the standards, there's no mandatory outdoor-air filtration beyond what is already provided for general filtration of recirculated air. The other possibilities aren't correct because filtration isn't required regardless of air quality, nor is it never required, and it isn't dictated by user preference. It depends on objective outdoor air quality relative to established standards.

7. What does the term 'reheat' refer to in HVAC systems?

A. The process of removing heat from air to cool a space.

B. The process of mixing return air with outside air.

C. The process of adding heat to air to maintain desired temperature.

D. The process of increasing humidity in air.

Reheat means adding heat to air to bring it back up to the desired room temperature after it has been cooled. In many HVAC designs, air is cooled and dehumidified at the central air handler, then, to satisfy zones that need warmth, a reheat device (such as electric coils or hot-water/steam coils) heats that cooled supply air before it enters the space. This lets you dehumidify and control temperature efficiently in the central system while still delivering comfortable temperatures to individual zones without overcooling elsewhere. This term is not about removing heat, mixing air, or increasing humidity. It specifically refers to the heating step applied to cooled supply air to reach the target setpoint.

8. In humidification calculations, the typical infiltration load is usually considered under which condition?

A. When the outdoor humidity is high.

B. When the ventilation rate is zero.

C. When indoor humidity is at the setpoint.

D. When the air is isothermal.

Infiltration load is the moisture that enters a space through leaks in the building envelope, not through the intended ventilation system. To estimate this latent load in a simple, actionable way, designers commonly isolate it by assuming there is no deliberate ventilation at all. When the ventilation rate is zero, any moisture that enters comes solely from infiltration, so the resulting latent load represents the baseline infiltration that the humidification system would need to handle. Real conditions will vary with outdoor humidity and indoor setpoints, but using zero ventilation provides a clear, worst-case–type estimate of infiltration. The other conditions change the actual moisture balance, but they don't define the standard way infiltration load is modeled.

9. How does 62.1 address particulate matter?

A. PM is not addressed by 62.1.

B. PM is addressed only by filtration in 62.1.

C. PM is addressed via filtration and ventilation strategies to limit exposure in the breathing zone.

D. PM is controlled solely by outdoor air dilution.

Particulate matter is controlled by a combined approach, not by a single method. ASHRAE 62.1 addresses PM by using filtration of the air that occupants breathe and by implementing ventilation strategies that dilute indoor air with outdoor air. Filtration removes particles from the air as it circulates through the HVAC system, while the ventilation design brings in outdoor air and exhausts indoor air to lower the concentration of particles in the breathing zone. This dual strategy is essential because relying on filtration alone doesn't account for particles that may enter indoors from outdoors or be generated indoors, and relying only on outdoor dilution misses the benefit of actively removing particles already present in the space. The result is a balanced approach that reduces occupant exposure to PM in the breathing zone.

10. What is commissioning in the context of 62.1?

A. The process of installing equipment

B. A process to verify that the installed ventilation system operates as designed and delivers required IAQ

C. The occupant comfort survey

D. The routine maintenance schedule

Commissioning in 62.1 means a deliberate verification process that the installed ventilation system operates as it was designed to operate and delivers the required indoor air quality. It goes beyond simply putting equipment in place; it involves checking that the design intent is realized in practice—testing airflow rates, ensuring controls and sequences work correctly, confirming proper ventilation and outdoor air delivery, and documenting performance. This helps ensure the system will meet IAQ requirements for occupants when the building is in use. Installing equipment is only part of the work, and not the full verification that the system actually delivers the intended IAQ. An occupant comfort survey happens after occupancy to assess comfort, not to verify design performance. A routine maintenance schedule is ongoing upkeep, not the initial verification that the system meets its design and IAQ goals.

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://ashrae621standardsairsys.examzify.com

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