NFPA-99 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. 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!

Questions

1. **Which assembly must be present on-site for the installation of medical gas systems by non-certified personnel?**

   A. Owner's representative

   B. Non-certified helpers

   C. Inspector certified to ASSE 6020

   D. General contractors

2. **What is the minimum clearance required around an emergency oxygen service connection (ESOC) during installation?**

   A. 1 foot.

   B. 3 feet.

   C. 5 feet.

   D. 1-1/2 times the width of the auxiliary.

3. **What is the consequence of not purging joints correctly during brazing?**

   A. Increased strength of the joint

   B. Formation of contaminants

   C. Improved thermal conductivity

   D. No significant effect

4. **In a building emergency reserve system provided as a substitute for the (ESOC), what is the minimum fire resistance rating for all walls, floors, ceilings, and doors?**

   A. 1 hour

   B. 2 hours

   C. 3 hours

   D. 4 hours

5. **What is a requirement for storing oxygen components in a category 1 distribution system?**

   A. Must be stored openly for inspection

   B. Should not exceed a certain inventory level

   C. Must be capped and plugged by the manufacturer until installation

   D. Can be stacked for space efficiency

6. Which type of compressor is permitted for use in a medical air system?

A. Rotary screw compressor

B. Liquid ring compressor

C. Reciprocating compressor

D. All of the above

7. All pressure relief valves shall be made of what material, other than brass or bronze?

A. Carbon steel

B. Cast iron

C. Copper

D. Stainless steel

8. Medical air compressor intakes must be located a minimum of how many feet from any exhaust or intake?

A. 10 feet

B. 12 feet

C. 15 feet

D. 25 feet

9. What should a medical gas master alarm panel indicate when communication with an alarm initiating device is lost?

A. Only an audible alarm

B. Only a visual alarm

C. Both audible and visual alarms

D. No alarm is necessary

10. When can an existing medical gas system continue to be used despite not being in strict compliance?

A. If it is deemed not a significant hazard to life by the authority having jurisdiction

B. If the chief administrator of the facility approves it

C. If proper signage is posted only

D. If no complaints have been raised

Answers

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

Explanations

1. Which assembly must be present on-site for the installation of medical gas systems by non-certified personnel?

A. Owner's representative

B. Non-certified helpers

C. Inspector certified to ASSE 6020

D. General contractors

The presence of an inspector certified to ASSE 6020 is crucial during the installation of medical gas systems by non-certified personnel. ASSE 6020 certification specifically qualifies individuals to ensure that installations comply with established safety standards and regulations. This certification demonstrates the individual's knowledge and understanding of the technical aspects of medical gas installations, which is essential for maintaining the integrity and safety of the systems being installed. Medical gas systems are subject to stringent regulations because they involve gases that are critical for patient care, such as oxygen or nitrous oxide. The inspector's role is to oversee the work done by non-certified personnel, ensuring that all installation practices adhere to the relevant codes and standards outlined by authorities such as the NFPA. While other individuals or groups, such as an owner's representative, non-certified helpers, or general contractors, may be involved in the process, they do not possess the specialized training or credentials necessary to perform the oversight required by the NFPA and ASSE standards. Involving a certified inspector helps to validate that the systems are being installed properly and safely, thereby reducing potential risks associated with non-compliance.

2. What is the minimum clearance required around an emergency oxygen service connection (ESOC) during installation?

A. 1 foot.

B. 3 feet.

C. 5 feet.

D. 1-1/2 times the width of the auxiliary.

The minimum clearance required around an emergency oxygen service connection (ESOC) during installation is three feet. This clear space is essential to ensure safe access to the service connections in emergency situations. Adequate clearance facilitates easy identification and operation of the ESOC, which is crucial during a medical emergency where reliable access to oxygen is needed quickly. In addition, this clearance helps prevent any potential obstruction that could arise from equipment or personnel, contributing to a safer environment. Following this guideline aligns with safety codes and practices outlined in NFPA 99, which prioritize the health and safety of both patients and healthcare providers.

3. What is the consequence of not purging joints correctly during brazing?

A. Increased strength of the joint

B. Formation of contaminants

C. Improved thermal conductivity

D. No significant effect

When brazing, purging joints correctly is critical to ensuring a clean and effective bond. The primary consequence of not purging joints properly is the formation of contaminants within the joint. Improper purging can leave behind residues such as moisture, oils, or oxidation, which can lead to poor adhesion and weaken the joint. These contaminants can interfere with the flow of the brazing material and create voids or inclusions that compromise the integrity of the joint. By failing to remove these impurities, the strength and reliability of the brazed connection can be significantly affected. Contaminants can lead to corrosion, reduced fatigue strength, and ultimately cause failure of the joint under stress or in adverse conditions. Hence, the importance of purging cannot be overstated in maintaining the quality and durability of brazed assemblies. In contrast, increased strength of the joint, improved thermal conductivity, and no significant effect would unlikely result from improper purging, as those outcomes are typically determined by the quality and cleanliness of the materials being joined.

4. In a building emergency reserve system provided as a substitute for the (ESOC), what is the minimum fire resistance rating for all walls, floors, ceilings, and doors?

A. 1 hour

B. 2 hours

C. 3 hours

D. 4 hours

The correct answer emphasizes that a minimum fire resistance rating of 1 hour is necessary for all walls, floors, ceilings, and doors in a building emergency reserve system designed to serve as a substitute for the Emergency Services Operations Center (ESOC). This requirement is grounded in the need to ensure a certain level of fire protection and containment for critical emergency response operations. A 1-hour fire resistance rating allows for adequate time to prevent the spread of fire during an emergency, ensuring that personnel and equipment can be safely utilized and that the operations center remains functional for a reasonable duration. This rating is deemed sufficient to provide necessary protection without imposing excessive structural demands on the overall system. Higher fire resistance ratings, such as 2 hours or more, are typically reserved for specific scenarios or structural elements that require more robust protection due to higher risks or the nature of the occupancy. Such ratings can create additional costs and may not be necessary for all aspects of an emergency reserve system, depending on the operational requirements and building codes. Therefore, the choice of a 1-hour rating strikes a balance between safety, functionality, and practicality in most cases involving emergency operations.

5. What is a requirement for storing oxygen components in a category 1 distribution system?

A. Must be stored openly for inspection

B. Should not exceed a certain inventory level

C. Must be capped and plugged by the manufacturer until installation

D. Can be stacked for space efficiency

In a category 1 distribution system, one critical requirement for storing oxygen components is that they must be capped and plugged by the manufacturer until installation. This is essential to ensure the safety and integrity of the oxygen components. Capping and plugging help to prevent contamination and protect the components from damage prior to their use. This practice is crucial because any form of contamination or compromise can lead to serious risks when the oxygen is distributed, particularly in healthcare settings where the purity of medical gases is paramount. Maintaining the manufacturer's protective measures guarantees that the components function correctly upon installation and minimizes the likelihood of hazards associated with improper handling or contamination. This requirement is part of a broader emphasis on safety and ensuring that all components in a medical gas system are maintained in their intended condition until they are ready for use.

6. Which type of compressor is permitted for use in a medical air system?

A. Rotary screw compressor

B. Liquid ring compressor

C. Reciprocating compressor

D. All of the above

The use of all types of compressors—rotary screw, liquid ring, and reciprocating—in a medical air system is permissible due to the specific requirements outlined in NFPA 99, which governs medical gas and vacuum systems. Each type of compressor has its own advantages and unique features that may be beneficial in medical applications. Rotary screw compressors are favored for their reliability and ability to provide a continuous flow of air, which is crucial in a medical setting where consistent air supply is essential. Their lower maintenance needs make them suitable for environments where downtime must be minimized. Liquid ring compressors are known for their ability to handle a variety of gases efficiently and have a reputation for producing a relatively dry air output. This can be significant in preventing the introduction of moisture into the medical air supply, thus maintaining the quality and safety of the air used in medical environments. Reciprocating compressors are often used due to their simplicity in design and versatility. They can be finely adjusted to meet the specific requirements of various medical applications, making them a reliable choice for many healthcare facilities. Since each compressor type can effectively meet the stringent safety and performance standards required for medical air systems, the option indicating that all types are permitted is correct. This ensures that healthcare facilities have the flexibility to

7. All pressure relief valves shall be made of what material, other than brass or bronze?

A. Carbon steel

B. Cast iron

C. Copper

D. Stainless steel

The correct material for pressure relief valves, aside from brass or bronze, is stainless steel due to its excellent corrosion resistance, durability, and ability to withstand high temperatures and pressures. Stainless steel provides a reliable performance in a variety of environments, making it an ideal choice for safety-critical applications in medical gas systems and other settings where pressure relief is essential. Additionally, stainless steel has good mechanical properties and can be easily fabricated to ensure precise performance. Other materials like carbon steel and cast iron may pose risks in certain environments, such as those involving corrosive gases or where hygiene is paramount, which makes them less suitable for pressure relief valves in medical applications. Copper, while conductive and useful for other plumbing functions, does not provide the same robust properties required for pressure relief applications. Thus, stainless steel stands out as the best option in ensuring safety and compliance with regulations.

8. Medical air compressor intakes must be located a minimum of how many feet from any exhaust or intake?

A. 10 feet

B. 12 feet

C. 15 feet

D. 25 feet

The requirement for medical air compressor intakes to be located a minimum of 25 feet from any exhaust or intake is crucial for several reasons related to patient safety and system efficiency. This distance is established to prevent contamination of the medical air supply from potentially hazardous fumes or particulate matter that could be present in exhaust air. By maintaining this distance, facilities can ensure the integrity and purity of the medical air used in healthcare settings, which is critical for patient care. Additionally, the separation helps to minimize the risk of any cross-contamination from other air systems in the facility, supporting compliance with health standards and regulations. In the context of healthcare environments, where air quality is essential for patient safety, adhering to this guideline is paramount. It reflects a proactive measure to safeguard against environmental pollutants that could compromise the quality of air delivered to patients, especially those with respiratory conditions.

9. What should a medical gas master alarm panel indicate when communication with an alarm initiating device is lost?

A. Only an audible alarm

B. Only a visual alarm

C. Both audible and visual alarms

D. No alarm is necessary

When communication with an alarm initiating device is lost, the medical gas master alarm panel is designed to ensure safety and alert personnel by indicating both an audible and visual alarm. This dual-alert system is crucial because it caters to different scenarios and settings within a healthcare facility. An audible alarm draws immediate attention to the issue, allowing staff to respond quickly, particularly in high-activity environments where visual cues might be missed. The visual alarm serves as an additional layer of notification that can alert personnel who may not currently be in the vicinity of the audible signal or who might be engaged in other tasks. The combination of these alarms enhances the response time to potential hazards associated with medical gas systems, thus ensuring that patient safety and compliance with standards are maintained. These protocols are typically dictated by safety regulations and guidelines, which prioritize thorough alert systems in healthcare environments.

10. When can an existing medical gas system continue to be used despite not being in strict compliance?

A. If it is deemed not a significant hazard to life by the authority having jurisdiction

B. If the chief administrator of the facility approves it

C. If proper signage is posted only

D. If no complaints have been raised

An existing medical gas system can continue to be used despite not being in strict compliance when it is deemed not a significant hazard to life by the authority having jurisdiction. This standard is crucial because it ensures that patient safety remains the top priority. The authority having jurisdiction (AHJ) is responsible for enforcing safety regulations and standards to minimize risks associated with medical gas systems. If the AHJ assesses that the system, despite its non-compliance, does not pose a considerable risk to life and health, it may allow continued use under specified conditions. The other options do not provide sufficient justification for the continued use of a non-compliant medical gas system. The chief administrator's approval might indicate a level of management support, but it does not replace the need for a safety assessment by the AHJ. Simply posting proper signage might inform users of potential hazards but doesn't address the underlying compliance issues, and basing continuation solely on the absence of complaints does not ensure that the system is safe to use. Therefore, the assessment by the AHJ is the basis for allowing continued operation, emphasizing safety and regulation adherence.

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://nfpa-99.examzify.com

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