

# Massachusetts Journeyman Pipefitter Practice Exam (Sample)

## Study Guide



**Everything you need from our exam experts!**

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# 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

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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. **The maximum size of a surface blow-off connection shall not exceed how many inches?**
  - A. 1 1/2 inches
  - B. 2 1/2 inches
  - C. 3 inches
  - D. 4 inches
  
2. **What are the minimum requirements for drainage pipe burial depth?**
  - A. At least 6 inches below ground level
  - B. At least 12 inches below ground level
  - C. At least 18 inches below ground level
  - D. At least 24 inches below ground level
  
3. **The purpose of a Flash Tank is to \_\_\_\_\_ .**
  - A. Recover condensed water only
  - B. Recover steam and condensate
  - C. Release pressure from the boiler
  - D. Measure steam output
  
4. **What is the maximum water temperature for heating boilers according to ASME V?**
  - A. 200 degrees
  - B. 250 degrees
  - C. 300 degrees
  - D. 350 degrees
  
5. **Which valve offers the least resistance to flow?**
  - A. Globe valve
  - B. Ball valve
  - C. Gate valve
  - D. Check valve

- 6. What is the function of air admittance valves (AAVs)?**
- A. To block airflow in plumbing systems**
  - B. To allow air into the plumbing system while preventing sewer gases from escaping**
  - C. To control the pressure within the water supply**
  - D. To provide a pathway for excess water to exit**
- 7. For high pressure boilers with more than 100 square feet of heating surface, the feed connection shall not be smaller than which pipe size?**
- A. 1/2"**
  - B. 3/4"**
  - C. 1"**
  - D. 2"**
- 8. What is the minimum size of the drain pipe required on a low water cut-off with a separate float chamber?**
- A. 1/2 inch**
  - B. 3/4 inch**
  - C. 1 inch**
  - D. 1.5 inches**
- 9. What is the maximum connection for a flanged safety valve?**
- A. 3"**
  - B. 4"**
  - C. 4 1/2"**
  - D. 5"**
- 10. Which code governs the installation of plumbing systems in Massachusetts?**
- A. National Plumbing Code**
  - B. Massachusetts State Plumbing Code**
  - C. Unified Building Code**
  - D. International Code Council Standards**

## Answers

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

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## **Explanations**

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**1. The maximum size of a surface blow-off connection shall not exceed how many inches?**

- A. 1 1/2 inches
- B. 2 1/2 inches**
- C. 3 inches
- D. 4 inches

The maximum size of a surface blow-off connection being limited to 2 1/2 inches is based on industry standards established to ensure safe and efficient operation of piping systems. Surface blow-off connections are typically designed to eliminate impurities or sediment that can accumulate in systems, such as boilers or tanks. Setting a maximum size of 2 1/2 inches effectively balances the need for sufficient flow for blow-off discharge while preventing excessive discharge that could lead to safety hazards or system inefficiencies. A connection larger than this size could potentially lead to difficulties in controlling the discharge, increasing the risk of overspill or accidental release of contained fluids, which can pose safety risks in terms of personnel safety and environmental concerns. This specification is part of the guidelines that help maintain the integrity and safety of piping systems across various applications, ensuring that blow-off mechanisms function as intended without introducing complications that larger connections might create. Keeping within the set size limitations allows for standardized practices among pipefitters and engineers, enhancing overall system reliability.

**2. What are the minimum requirements for drainage pipe burial depth?**

- A. At least 6 inches below ground level
- B. At least 12 inches below ground level**
- C. At least 18 inches below ground level
- D. At least 24 inches below ground level

The minimum requirements for drainage pipe burial depth are specified to prevent damage to the pipes from freezing, shifting soil, or surface activities. The correct answer indicates that the minimum burial depth is at least 12 inches below ground level. This allows for adequate protection against freeze-thaw cycles that could compromise the integrity of the drainage system, especially in regions that experience winter temperatures. This depth also helps to ensure that the drainage pipes are below the frost line, which is critical in maintaining their functionality throughout the year. By adhering to this requirement, you minimize the risk of the pipes being disturbed or damaged by surface activities, such as vehicular traffic or landscaping work, which could affect their performance and longevity.

3. The purpose of a Flash Tank is to \_\_\_\_\_ .

- A. Recover condensed water only
- B. Recover steam and condensate**
- C. Release pressure from the boiler
- D. Measure steam output

A Flash Tank is designed to efficiently recover both steam and condensate from a system. When condensate (the liquid form of steam) enters the flash tank under pressure, the pressure drop within the tank allows a portion of the condensate to vaporize or "flash" into steam. This process not only recovers the latent heat of evaporation but also increases the overall efficiency of the heating system. By capturing both forms of energy—steam and condensate—the flash tank ensures that valuable resources are not wasted and can be reused within the system. The recovery of steam and condensate is critical for maintaining energy efficiency and reducing operational costs in steam systems. The other options don't fully capture the primary function of a flash tank. For instance, while some applications may involve water recovery or pressure reduction, the core capability of a flash tank is its dual recovery of steam and condensate.

4. What is the maximum water temperature for heating boilers according to ASME V?

- A. 200 degrees
- B. 250 degrees**
- C. 300 degrees
- D. 350 degrees

According to ASME V, the maximum water temperature for heating boilers is 250 degrees Fahrenheit. This temperature limit is in place to ensure the safe operation of the boiler systems and to minimize the risk of failures or malfunctions that could lead to hazardous situations. The specification is designed to address safety concerns, as higher temperatures could increase the pressure beyond safe limits, potentially leading to boiler explosions or other dangerous situations. Setting the maximum at 250 degrees also helps maintain the integrity of materials used in boiler construction and minimizes the wear and tear that can be caused by prolonged exposure to higher temperatures. This temperature standard is widely recognized in the industry for ensuring a balance between efficiency and operational safety in heating applications.

## 5. Which valve offers the least resistance to flow?

- A. Globe valve
- B. Ball valve
- C. Gate valve**
- D. Check valve

The gate valve is designed specifically for allowing or blocking the flow of fluid with minimal resistance. When the gate is fully open, it creates a straight path for the fluid, which significantly reduces turbulence and pressure drops compared to other types of valves. This feature makes the gate valve especially effective for applications where the flow rate needs to be maximized, such as in water supply systems or pipelines. In contrast, the globe valve has a more complex internal structure that causes increased turbulence and pressure loss, making it less efficient for flow. A ball valve, while offering good flow characteristics when fully open, can still introduce some restrictions due to the internal design. The check valve is used primarily to prevent backflow and is not designed for minimal flow resistance; its operation introduces additional friction and flow disruption. Therefore, the gate valve is the best choice when it comes to ensuring the least resistance to flow in a piping system.

## 6. What is the function of air admittance valves (AAVs)?

- A. To block airflow in plumbing systems
- B. To allow air into the plumbing system while preventing sewer gases from escaping**
- C. To control the pressure within the water supply
- D. To provide a pathway for excess water to exit

Air admittance valves (AAVs) serve a critical role in plumbing systems by allowing air to enter the drainage system while simultaneously preventing the escape of sewer gases. This function is essential to maintain proper air pressure and facilitate drainage without the need for traditional venting methods that extend through the roof. By permitting air to equalize pressure changes that occur during drainage, AAVs help prevent siphoning of trap seals, thus preventing foul odors from gases in the sewer system from entering the building. Understanding the necessary balance between air and liquid in plumbing is vital for maintaining effective drainage and sanitation. AAVs achieve this balance, making them particularly useful in situations where extending a vent line is impractical or where space is constrained. Their design allows them to open and close automatically based on pressure changes within the system, ensuring a smart response that contributes to the overall efficiency and functionality of the plumbing network.

**7. For high pressure boilers with more than 100 square feet of heating surface, the feed connection shall not be smaller than which pipe size?**

- A. 1/2"
- B. 3/4"**
- C. 1"
- D. 2"

For high pressure boilers with more than 100 square feet of heating surface, the requirement for the feed connection is critical to ensure proper operation and efficiency. The correct pipe size of 3/4 inch is established to accommodate the necessary flow rates required for these systems. The feedwater system plays a vital role in maintaining water levels and providing enough water to generate steam. If the feed connection is too small, it could lead to inadequate water supply, resulting in reduced efficiency and potentially dangerous situations such as boiler overheating or failure to maintain pressure. Using a 3/4 inch feed line allows for sufficient water flow to meet the demands of larger high pressure boilers. This size effectively balances the need to supply adequate water while maintaining proper pressure levels within the system. Therefore, adhering to this standard is essential for the safety and functionality of high pressure boiler systems.

**8. What is the minimum size of the drain pipe required on a low water cut-off with a separate float chamber?**

- A. 1/2 inch
- B. 3/4 inch**
- C. 1 inch
- D. 1.5 inches

The minimum size of the drain pipe required on a low water cut-off with a separate float chamber is 3/4 inch. This requirement is based on standard plumbing practices and the operational needs of the low water cut-off system, which is designed to prevent the boiler from running dry. A 3/4 inch drain pipe provides sufficient flow capacity to ensure that water can be adequately drained without causing any obstruction or backup, which could interfere with the proper functioning of the cut-off mechanism. In the context of plumbing systems, using a pipe that is too small can lead to issues such as increased pressure, potential leaks, and inefficient draining, while a correctly sized drain ensures that any excess water is removed quickly and effectively. This specification helps maintain the safety and reliability of the boiler system by ensuring that the float chamber can accurately monitor water levels and react appropriately.

**9. What is the maximum connection for a flanged safety valve?**

- A. 3"
- B. 4"
- C. 4 1/2"**
- D. 5"

The maximum connection for a flanged safety valve is based on industry standards and codes, which typically specify that the flanged connection should not exceed a certain size to ensure the effectiveness and safe operation of the valve. A flanged safety valve is designed for easy removal and maintenance, and its size is critical in maintaining the proper operation, functional safety, and performance of the system it serves. In this context, the correct answer of 4 1/2" aligns with accepted engineering practices and codes, which recognize this as an optimal size for ensuring that the safety valve can function effectively without risking leakage or failure due to mechanical stress. Sizes greater than 4 1/2" may not be in compliance with specific regulations or may pose challenges such as increased weight, structural integrity concerns, and difficulties in installation or maintenance. Thus, adhering to the maximum connection size is essential for both safety and operational efficiency in piping systems.

**10. Which code governs the installation of plumbing systems in Massachusetts?**

- A. National Plumbing Code
- B. Massachusetts State Plumbing Code**
- C. Unified Building Code
- D. International Code Council Standards

The installation of plumbing systems in Massachusetts is governed by the Massachusetts State Plumbing Code. This code is specifically tailored to meet the unique needs and regulations of plumbing work within the state. It outlines standards for the design, materials, installation, inspection, and maintenance of plumbing systems, ensuring safety and compliance with local laws. The Massachusetts State Plumbing Code is developed to comply with state laws and reflects best practices that may be distinct from those in other regions. This enhances the ability to address the specific environmental and public health contexts found in Massachusetts, such as water quality issues, wastewater management, and other local requirements. Other codes, such as the National Plumbing Code or the Unified Building Code, may provide general guidelines and standards, but they do not take precedence over the state-specific code in terms of enforcement and local compliance. Similarly, while the International Code Council Standards are important, they serve as a broader framework but may not include the specific provisions required by the Massachusetts State Plumbing Code for plumbing installations.

# 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](mailto:hello@examzify.com).**

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

**<https://majourneymanpipefitter.examzify.com>**

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

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