

Journeyman Plumber 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. 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 must be submitted when connecting more than 4 appliances through a common vent connector?**
 - A. A payment to the local authority**
 - B. A schedule for the installation**
 - C. A plan to the inspector and gas supplier**
 - D. A notification to the property owner**
- 2. For a boiler with an input of 124,000 BTUs, how much cubic feet of gas is required?**
 - A. 100 cubic ft**
 - B. 124 cubic ft**
 - C. 150 cubic ft**
 - D. 175 cubic ft**
- 3. How many cubic inches are there in one cubic foot?**
 - A. 128 cubic inches**
 - B. 144 cubic inches**
 - C. 1728 cubic inches**
 - D. 19683 cubic inches**
- 4. What is the maximum developed length of a 2 1/2" vent?**
 - A. 200 feet**
 - B. 250 feet**
 - C. 300 feet**
 - D. 350 feet**
- 5. If a column of water exerts a pressure of 50 PSI, how high must the water be inside that column?**
 - A. 100.5'**
 - B. 115.5'**
 - C. 150'**
 - D. 125'**

- 6. Which of the following is essential in preventing blockages in plumbing stacks?**
- A. Anti-siphon Vents**
 - B. Deaertor**
 - C. Drain Traps**
 - D. Cleanouts**
- 7. What is the minimum size local vent required for a bed pan washer?**
- A. 1 inch**
 - B. 2 inches**
 - C. 3 inches**
 - D. 4 inches**
- 8. What type of bend is typically used to connect a vent stack to a waste stack at the lower end?**
- A. 1/8 bend (45 degrees)**
 - B. 1/4 bend (90 degrees)**
 - C. 1/2 bend (45 degrees)**
 - D. Straight connection**
- 9. What diameter of vent pipe is required for a sump pump with a discharge of 60 gpm and a length of 78 inches?**
- A. 1 inch**
 - B. 2 inches**
 - C. 3 inches**
 - D. 4 inches**
- 10. What is the formula for a vent connector?**
- A. D^2 of larger pipe plus D^2 of smaller pipe divided by 2**
 - B. D^2 of larger pipe minus D^2 of smaller pipe divided by 2**
 - C. Sum of D^2 of both pipes**
 - D. Average of D^2 of both pipes**

Answers

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

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Explanations

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1. What must be submitted when connecting more than 4 appliances through a common vent connector?

- A. A payment to the local authority**
- B. A schedule for the installation**
- C. A plan to the inspector and gas supplier**
- D. A notification to the property owner**

When connecting more than four appliances through a common vent connector, it is essential to submit a plan to both the inspector and the gas supplier. This requirement exists because a larger number of appliances introduces complexities in terms of vent sizing, airflow, and safety considerations. The submission of a detailed plan ensures that both the inspector and the gas supplier can review the proposed setup for compliance with safety and code standards. This process helps prevent issues such as improper venting that could lead to dangerous situations, including the risk of carbon monoxide buildup due to inadequate venting. By coordinating with the gas supplier, the installer ensures that the gas supply will adequately support the total demand of the connected appliances, confirming that everything is safely and correctly installed from both a mechanical and regulatory standpoint. Adhering to such requirements exemplifies best practices in plumbing and gas installations, prioritizing safety and efficiency.

2. For a boiler with an input of 124,000 BTUs, how much cubic feet of gas is required?

- A. 100 cubic ft**
- B. 124 cubic ft**
- C. 150 cubic ft**
- D. 175 cubic ft**

To determine how much cubic feet of gas is required for a boiler with an input of 124,000 BTUs, it is important to know the conversion factor between BTUs and cubic feet of gas. In the case of natural gas, one cubic foot typically produces about 1,000 BTUs of energy. Using this conversion, you can calculate the necessary volume of gas. For a boiler with an input of 124,000 BTUs, you would divide the total BTUs by the BTUs produced per cubic foot of gas:
$$\text{Cubic feet of gas} = \frac{\text{BTUs required}}{\text{BTUs per cubic foot}} = \frac{124,000 \text{ BTUs}}{1,000 \text{ BTUs/cubic foot}} = 124 \text{ cubic feet}$$
 This calculation accurately reflects how much cubic feet of gas is needed to meet the input requirements of the boiler. Therefore, 124 cubic feet is the correct answer based on the typical energy content of natural gas. It is critical to remember that different types of gas can have varying energy content, but in this context with natural gas, 124 cubic feet aligns with the

3. How many cubic inches are there in one cubic foot?

- A. 128 cubic inches
- B. 144 cubic inches
- C. 1728 cubic inches**
- D. 19683 cubic inches

To determine how many cubic inches are in one cubic foot, it's essential to understand the relationship between different units of volume. One foot is equivalent to 12 inches. Therefore, to convert cubic feet to cubic inches, you would use the conversion factor for each dimension of the cube. A cubic foot is a cube that measures 1 foot on each side. Since 1 foot equals 12 inches, the dimensions of the cube in inches would be 12 inches on each side. To find the volume in cubic inches, you calculate the volume of the cube by multiplying the length, width, and height together: $\text{Volume} = \text{length} \times \text{width} \times \text{height} = 12 \text{ inches} \times 12 \text{ inches} \times 12 \text{ inches}$ Calculating this gives: $12 \times 12 = 144 \text{ square inches}$ $144 \times 12 = 1728 \text{ cubic inches}$ Thus, there are 1728 cubic inches in one cubic foot. This understanding ensures accurate conversions in plumbing and construction

4. What is the maximum developed length of a 2 1/2" vent?

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

The maximum developed length of a 2 1/2" vent is indeed 300 feet, according to plumbing codes and practices. The developed length is crucial because it directly impacts the ability of the vent system to function properly, allowing gases to escape and air to enter the plumbing system. A vent that is too long can create a negative impact on the system's ability to vent effectively, potentially leading to traps being siphoned, which can cause drainage issues and sewer gases to enter the building. The specified maximum length is established to ensure that the venting retains its efficiency for proper air circulation and drainage function. Understanding the limits on vent lengths helps plumbers design and install systems that comply with building codes and provide safe sanitation and drainage. The other lengths suggested would exceed the recommended maximum for a vent of this size, which can compromise the system's performance.

5. If a column of water exerts a pressure of 50 PSI, how high must the water be inside that column?

- A. 100.5'
- B. 115.5'**
- C. 150'
- D. 125'

To determine the height of a column of water that exerts a pressure of 50 PSI, you can use the formula that relates pressure, height, and the density of the fluid. Specifically, the pressure exerted by a column of water in PSI can be calculated using the equation: $\text{Pressure (PSI)} = \frac{\text{Height (feet)} \times \text{Density of Water (lb/ft}^3\text{)}}{144}$ For water, the density is approximately 62.4 lb/ft³. Since there are 144 square inches in a square foot, we can rearrange the formula to solve for height (in feet): $\text{Height (feet)} = \frac{\text{Pressure (PSI)} \times 144}{\text{Density of Water (lb/ft}^3\text{)}}$ Substituting the known values: $\text{Height (feet)} = \frac{50 \times 144}{62.4}$ Calculating this gives: $\text{Height (feet)} = \frac{7200}{62.4} \approx 115.38$

6. Which of the following is essential in preventing blockages in plumbing stacks?

- A. Anti-siphon Vents
- B. Deaerator**
- C. Drain Traps
- D. Cleanouts

The choice of deaerator as an essential element in preventing blockages in plumbing stacks is not aligned with typical plumbing practices. Instead, an anti-siphon vent is crucial for maintaining proper airflow within the plumbing system, which helps to prevent pressure differences that could lead to blockages. Anti-siphon vents are designed to allow air to enter the plumbing system, preventing the creation of a vacuum that could impede drainage. When a vacuum occurs, it can cause waste water to back up or not flow properly, potentially leading to blockages in the stack. By ensuring that air can flow freely in and out of the system, these vents help maintain proper drainage and prevent the buildup of waste materials. Cleanouts also play a significant role in managing blockages by providing access points for clearing clogs. While drain traps are essential for preventing sewer gases from entering the building, their function relates more to odor control rather than directly preventing blockages in stacks. In summary, effective prevention of plumbing stack blockages hinges on proper venting through anti-siphon vents and the installation of cleanouts.

7. What is the minimum size local vent required for a bed pan washer?

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

The minimum size for a local vent required for a bedpan washer is 2 inches. This specific sizing is crucial due to the nature and usage of bedpan washers, which often deal with significant waste and require adequate venting to ensure proper drainage and prevent the potential for sewer gases entering the space. By utilizing a 2-inch vent, the system ensures that air can flow freely, aiding in the drainage process and maintaining efficient operation. A vent of this size allows for sufficient air exchange, which helps to mitigate the risk of siphoning and back pressure that could otherwise disrupt the drainage system. It is important to adhere to the plumbing codes and standards that dictate these requirements for the installation and maintenance of plumbing fixtures, especially those associated with healthcare settings like bedpan washers. This code compliance is essential for both functionality and hygiene in medical environments.

8. What type of bend is typically used to connect a vent stack to a waste stack at the lower end?

- A. 1/8 bend (45 degrees)**
- B. 1/4 bend (90 degrees)**
- C. 1/2 bend (45 degrees)**
- D. Straight connection**

The correct answer is the 1/8 bend (45 degrees). This type of bend is commonly used in plumbing to connect a vent stack to a waste stack at the lower end because it allows for a smooth transition with a slight angle that maintains proper flow. A 45-degree angle is beneficial because it reduces the likelihood of clogs by minimizing sharp turns, which can cause turbulence and impede the flow of air and waste. Using a 1/4 bend (90 degrees) would create a sharper turn than desirable in this context; such a sharp angle can create resistance to airflow, which is crucial for effective venting. A 1/2 bend (45 degrees) does not currently correspond to standard plumbing terminology, as standard fittings usually do not designate a half-bend option in this manner, making it somewhat ambiguous. A straight connection could theoretically work, but doing so would not provide the necessary angle for optimal venting and drainage performance, which a 1/8 bend does. Therefore, utilizing a 1/8 bend is the best practice for ensuring efficient plumbing function in this scenario.

9. What diameter of vent pipe is required for a sump pump with a discharge of 60 gpm and a length of 78 inches?

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

For a sump pump with a discharge of 60 gallons per minute (gpm) and a length of 78 inches, the required vent pipe diameter is determined based on several key factors, including the flow rate and the application of the vent pipe. A vent pipe is critical for allowing air to enter the drainage system, which helps to prevent vacuum conditions as water is pumped out. In this scenario, a 2-inch diameter vent pipe is suitable for accommodating the flow from a sump pump operating at 60 gpm. The sizing guidelines for vent pipes are typically based on flow rates and the specific applications they serve. A vent pipe of this diameter can handle the air flow generated by the discharge from the sump pump effectively, which is essential for maintaining proper drainage and preventing any potential blockages or issues in the plumbing system. Choosing a larger diameter than necessary could unnecessarily increase costs and installation complexity, while a smaller diameter might not provide the required ventilation, leading to possible pressure issues. Therefore, the selection of a 2-inch diameter pipe adequately balances performance, safety, and practicality for this specific application.

10. What is the formula for a vent connector?

- A. D^2 of larger pipe plus D^2 of smaller pipe divided by 2**
- B. D^2 of larger pipe minus D^2 of smaller pipe divided by 2
- C. Sum of D^2 of both pipes
- D. Average of D^2 of both pipes

The formula for a vent connector is derived from the requirement to balance the cross-sectional areas of the pipes involved in the ventilation system. Specifically, the correct formula reflects the need to take into account the effective areas of both the larger and smaller pipes to ensure proper airflow and function. The formula involves calculating the diameter squared of both the larger and smaller pipes and then adding them together. This is important because, in ventilation systems, the total capacity for airflow needs to be considered to prevent issues like backdrafting or inadequate ventilation. Taking the sum of the diameter squares allows for an accurate representation of the total area available for gas movement, leading to effective venting and minimizing risks associated with inadequate ventilation. This highlights the necessity of maintaining the right relationship between different pipe sizes when designing or analyzing a vent connector. In contrast, other choices present variations that do not accurately reflect the need to consider both the added capacity and area of both pipes, which is crucial for efficient venting performance.

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://journeymanplumber.examzify.com>

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