

Sheet Metal Journeyman Practice Test (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 15

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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. Which statement best identifies a good quality edge after punching or shearing?**
 - A. A rough edge with burrs.**
 - B. A smooth edge with minimal burrs and consistent thickness.**
 - C. A sharp edge that can cut the operator.**
 - D. An edge with color due to heat treatment.**

- 2. Gypsum ducts are for return air only and limited to what maximum temperature in °F?**
 - A. 150**
 - B. 125**
 - C. 100**
 - D. 175**

- 3. When would you choose to use a pop rivet instead of a solid rivet?**
 - A. For quick assembly when access is limited or when disassembly is not required.**
 - B. For permanent, structural joints with high load.**
 - C. When cylindrical alignment is critical for disassembly.**
 - D. When requiring reusable fasteners.**

- 4. What is beading?**
 - A. A folded stiffening rib added to a panel to increase rigidity**
 - B. A rounded edge**
 - C. A decorative crease**
 - D. A type of gasket**

- 5. When selecting a bend radius for thin sheet metal, what must be verified to prevent cracking?**
 - A. The color of the coating**
 - B. Material capability**
 - C. Bend direction**
 - D. Ambient humidity**

- 6. The process by which a gas converts to a liquid when the temperature decreases is called?**
- A. Evaporation**
 - B. Sublimation**
 - C. Precipitation**
 - D. Condensation**
- 7. Name two common rivet types used in sheet metal work and a basic use for each.**
- A. Solid rivets for permanent, structural joints; pop rivets for quick, single-sided installation.**
 - B. Screws for permanent, structural joints; bolts for quick, single-sided installation.**
 - C. Tacks for decorative; rivets for cosmetic.**
 - D. Nails for structural; staples for sealing.**
- 8. Makeup air recirculation for unmanned spray operations is permitted when vapor concentration is less than what percent of LFL?**
- A. 5%**
 - B. 10%**
 - C. 50%**
 - D. 25%**
- 9. A draft hood is located so the relief opening is not less than _____ inches from any surface except that of the appliance it serves.**
- A. 4**
 - B. 6**
 - C. 8**
 - D. 12**
- 10. When hanging a 36-inch round duct at 12-foot intervals, what is the minimum strap size?**
- A. 18 ga**
 - B. 22 ga**
 - C. 16 ga**
 - D. 20 ga**

Answers

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

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Explanations

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1. Which statement best identifies a good quality edge after punching or shearing?

A. A rough edge with burrs.

B. A smooth edge with minimal burrs and consistent thickness.

C. A sharp edge that can cut the operator.

D. An edge with color due to heat treatment.

After punching or shearing, edge quality should be safe to handle, uniform, and ready for further work. A good edge is smooth with minimal burrs and consistent thickness. Burrs are small raised edges left from the cutting process that can cut the operator, trap debris, and cause fit or finish problems, so minimizing them is essential. Consistent thickness ensures parts maintain the expected tolerances and mate properly with other components, reducing binding and the need for rework. A sharp edge that can cut is unsafe and undesirable, and color changes from heat treatment don't reliably indicate edge quality or suitability for assembly.

2. Gypsum ducts are for return air only and limited to what maximum temperature in °F?

A. 150

B. 125

C. 100

D. 175

Gypsum ducts are interior ductwork made from gypsum board and are used primarily for return air, not for hot supply air. They are limited to a maximum operating temperature of 125°F because the gypsum core, paper facing, and the joining materials aren't rated for higher temperatures. Exceeding 125°F can weaken the duct, cause sagging or delamination, and reduce fire-rated performance. So 125°F is the correct maximum. Values above that (150°F, 175°F) would exceed the material's rating, while 100°F is below the limit but not the maximum allowed.

3. When would you choose to use a pop rivet instead of a solid rivet?

A. For quick assembly when access is limited or when disassembly is not required.

B. For permanent, structural joints with high load.

C. When cylindrical alignment is critical for disassembly.

D. When requiring reusable fasteners.

Pop rivets are designed to be installed from the accessible side only, which makes them ideal for quick assemblies when you can't reach the back of the joint or when you don't plan to take the assembly apart. The riveting tool pulls the mandrel through the rivet body, forming a bulged backside that clamps the sheets together in one pass, without needing access to the far side. That one-sided installation speed and simplicity is exactly why you'd choose a pop rivet in this scenario. They aren't favored for high-load structural joints, where solid rivets or other high-strength fasteners provide better strength and load transfer. And once a pop rivet is set, it's usually permanent and not reusable, so disassembly would require drilling out the rivet.

4. What is beading?

- A. A folded stiffening rib added to a panel to increase rigidity**
- B. A rounded edge**
- C. A decorative crease**
- D. A type of gasket**

Beading is a folded stiffening rib added to a panel to increase rigidity. By forming a raised ridge along the sheet, the panel gains greater resistance to bending and buckling because the bead increases the section's stiffness. It acts like a small built-in frame that stiffens the flat surface, which is especially helpful on long panels or around openings. This isn't just a rounded edge or a decorative crease; those features serve different purposes (rounding edges for safety or aesthetics, decorative creases for appearance). And it's not a gasket, which is a seal between parts.

5. When selecting a bend radius for thin sheet metal, what must be verified to prevent cracking?

- A. The color of the coating**
- B. Material capability**
- C. Bend direction**
- D. Ambient humidity**

When forming thin sheet metal, the danger of cracking at the bend comes from whether the material can tolerate the plastic deformation required by that bend. Verifying material capability means checking the metal's formability, ductility, thickness, and any coatings to ensure the bend radius is within what the material can safely bend without cracking. If the bend radius is too small for the material's capability, the outer fibers stretch and fracture can occur along the bend. This is why material capability is the best choice: it directly addresses whether the metal itself can withstand the bending without fracturing, considering its properties and any coating that might impair bendability. The other factors don't directly determine crack risk in bending: the color of the coating doesn't influence formability, bend direction isn't a primary factor in crack susceptibility, and ambient humidity isn't a controlling factor for the immediate crack resistance of the bend.

6. The process by which a gas converts to a liquid when the temperature decreases is called?

- A. Evaporation**
- B. Sublimation**
- C. Precipitation**
- D. Condensation**

Condensation is the process by which a gas becomes a liquid as it cools. When a gas loses energy, its molecules slow down and the attractive forces between them pull them into a coordinated liquid state. This release of energy accompanies the phase change. Evaporation is the reverse: a liquid turning into a gas when it's heated or when pressure is reduced. Sublimation is a solid turning directly into a gas, skipping the liquid phase. Precipitation refers to liquid water or ice falling from the atmosphere, not the direct gas-to-liquid transition.

7. Name two common rivet types used in sheet metal work and a basic use for each.

A. Solid rivets for permanent, structural joints; pop rivets for quick, single-sided installation.

B. Screws for permanent, structural joints; bolts for quick, single-sided installation.

C. Tacks for decorative; rivets for cosmetic.

D. Nails for structural; staples for sealing.

Two common rivet types in sheet metal work are solid rivets and blind rivets (pop rivets). Solid rivets create permanent, structural joints because the rivet is inserted through drilled holes and then the tail is peened or formed on the shop side to lock the pieces together, producing a very strong clamp. They require access to both sides to properly form the second head. Blind rivets are installed from one side using a rivet gun; the mandrel is pulled to expand the rivet body and clamp the sheets, which makes them ideal when the far side isn't accessible or you need a quick assembly. In practice, use solid rivets for strong, permanent joints where both sides can be reached, and use blind rivets when you need fast, single-sided installation.

8. Makeup air recirculation for unmanned spray operations is permitted when vapor concentration is less than what percent of LFL?

A. 5%

B. 10%

C. 50%

D. 25%

Vapor concentration relative to the Lower Flammable Limit (LFL) is what governs whether makeup air can be recirculated during unmanned spray operations. The LFL is the minimum vapor concentration that can ignite in air; concentrations below that are too lean to burn. When the vapor concentration is less than 10% of LFL, the atmosphere is well outside the flammable range, so recirculating the internal air doesn't significantly raise ignition risk. That's why this scenario allows makeup air recirculation. If the concentration were higher than that threshold, recirculating air could trap vapors and create a flammable mixture, increasing the chance of ignition and requiring different ventilation practices. Therefore, the permissible threshold is 10% of LFL.

9. A draft hood is located so the relief opening is not less than _____ inches from any surface except that of the appliance it serves.

- A. 4
- B. 6**
- C. 8
- D. 12

The main idea here is that a draft hood's relief opening must have enough room around it so combustion gases can exit freely without being trapped or redirected by nearby surfaces. Keeping a minimum distance from other surfaces prevents backdraft or recirculation of the exhaust, which could push gases back toward the appliance or into the surrounding area, and it also reduces the chance of heat affecting adjacent materials or igniting combustible items. The only surface that can be close to the opening is the appliance itself, since the relief path is part of that same unit. If the opening is too close to walls, cabinets, or other equipment, you risk obstructing the venting flow and creating unsafe conditions.

10. When hanging a 36-inch round duct at 12-foot intervals, what is the minimum strap size?

- A. 18 ga
- B. 22 ga
- C. 16 ga
- D. 20 ga**

Support straps must carry the duct's weight between hangers and resist bending over the 12-foot span. The gauge indicates thickness: thinner gauges (higher numbers) are weaker, thicker gauges (lower numbers) are stronger. For a 36-inch round duct, the strap has to hold a substantial load without sagging or failing between supports. A 22-gauge strap is too light for that span and duct size, as it can bend or fail under the load. Thicker options like 18- or 16-gauge would certainly meet the strength needs, but they're more material and cost than necessary. A 20-gauge strap provides the right balance of adequate strength and economy for maintaining secure support at a 12-foot interval, making it the minimum appropriate choice.

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://sheetmetaljourneyman.examzify.com>

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

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