

SHEET METAL TRADE AND SMWIA 2ND YEAR PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://sheetmetaltradesmwia2ndyear.examzify.com>



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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. FRP is made from what material arrangement?**
 - A. Alternating layers of fiberglass cloth and resin over a mold.
 - B. Sheets of aluminum with epoxy coating
 - C. Solid plastic with nylon filler
 - D. Thermoplastic blend of PVC and PET
- 2. Is smoke produced by FCAW greater than with GTAW and GMAW?**
 - A. No
 - B. Sometimes
 - C. Yes
 - D. Not applicable
- 3. Is CPVC plastic used in high-temperature installations?**
 - A. True
 - B. False
 - C. CPVC is not used in high-temperature installations
 - D. CPVC cannot handle high temperature
- 4. Under DCEN, a thoriated 1/16 inch tungsten should be operated in which amperage range?**
 - A. 5 to 15 Amps
 - B. 20 to 60 Amps
 - C. 70 to 150 Amps
 - D. 150 to 250 Amps
- 5. Does partial release mean that not all duct can be efficiently shipped?**
 - A. No
 - B. Sometimes
 - C. Yes
 - D. Always

- 6. Nail-in anchors are rated from 500-1,500 pounds for a tensile load in concrete.**
- A. Nail-in anchors are rated for horizontal loads only.
 - B. Nail-in anchors are rated from 100-300 pounds for a tensile load in concrete.
 - C. Nail-in anchors are rated for tensile loads in concrete but not specified in range.
 - D. Nail-in anchors are rated from 500-1,500 pounds for a tensile load in concrete.
- 7. Which set of drawings would you consult to understand load-bearing elements and columns within a building?**
- A. Architectural drawings
 - B. Mechanical drawings
 - C. Structural drawings
 - D. Electrical drawings
- 8. What can happen when tightly stacked materials are stored on a jobsite?**
- A. Moisture can condense between the sheets causing discoloration or premature corrosion.
 - B. They become lighter and easier to move.
 - C. They improve air circulation around sheets.
 - D. They repel moisture.
- 9. Which plastic category is commonly used in reinforced composites?**
- A. Thermoplastic
 - B. Elastomer
 - C. Thermoset
 - D. Bioplastic
- 10. What standards should be followed when welding with FCAW?**
- A. OSHA CFR 1926 Subpart J, OSHA CFR 1910 Subpart Q, ANSI Z49.1
 - B. NFPA 70, ANSI A20.0, OSHA CFR 1910 Subpart P
 - C. ASME Boiler Code, AWS D1.1, ISO 9001
 - D. EPA 40 CFR Part 63, OSHA CFR 1910 Subpart Q, ANSI Z49.1

Answers

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

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Explanations

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1. FRP is made from what material arrangement?

- A. Alternating layers of fiberglass cloth and resin over a mold.
- B. Sheets of aluminum with epoxy coating
- C. Solid plastic with nylon filler
- D. Thermoplastic blend of PVC and PET

Fiber Reinforced Plastic is a composite made by embedding reinforcing fibers in a polymer resin. In most FRP parts, fiberglass cloth is laid up over a mold and saturated with resin, with multiple layers added before the resin cures. The fiberglass provides strength and stiffness, while the resin binds the fibers and transfers loads between layers, giving a strong, lightweight material. This arrangement—fiberglass fabric plus resin laid over a mold and cured—is what defines FRP, rather than metal substrates with coatings, solid plastics with fillers, or thermoplastic blends that don't use a fiber-reinforced resin matrix.

2. Is smoke produced by FCAW greater than with GTAW and GMAW?

- A. No
- B. Sometimes
- C. Yes
- D. Not applicable

Smoke and fumes in welding come from the materials that decompose or react in the arc. Flux-core FCAW carries flux inside the wire; as the arc heats the flux, it breaks down into gaseous byproducts and metal oxides, which form more smoke and fumes than processes that rely mainly on shielding gas. GTAW uses a non consumable tungsten electrode with a shielding gas and melts the metal cleanly, producing very little fume. GMAW with solid wire also relies on shielding gas with fewer flux reactions, so its fumes are typically lower than FCAW. Because of the additional flux reactions, FCAW generally generates more smoke than GTAW and GMAW.

3. Is CPVC plastic used in high-temperature installations?

- A. True
- B. False
- C. CPVC is not used in high-temperature installations
- D. CPVC cannot handle high temperature

CPVC is designed to withstand higher temperatures than standard PVC, so it is used for hot-water installations. Its heat tolerance means it can carry hot potable water safely, typically up to about 180°F (82°C), and in some systems up to about 200°F (93°C) under specific pressure ratings. This higher temperature resilience lets CPVC replace PVC in hot-water piping while remaining a plastic option rather than metal. Just be sure the specific CPVC product and joint method are rated for the system's temperature and pressure, since very high-temperature or high-pressure applications may require metal piping or specialized plastics.

4. Under DCEN, a thoriated 1/16 inch tungsten should be operated in which amperage range?

- A. 5 to 15 Amps
- B. 20 to 60 Amps
- C. 70 to 150 Amps**
- D. 150 to 250 Amps

In GTAW with DCEN, the tungsten is negative and the arc heat is directed into the workpiece, so the electrode must carry enough current without overheating. A 1/16 inch thoriated tungsten has the right balance of size and emission for mid-to-high currents, making 70 to 150 amps the practical range. Running in this window gives a stable arc and good penetration for typical welds on many steels and thicknesses. If you drop well below 70 A, the arc can become unstable and the tungsten may not perform well; pushing above 150 A risks overheating the tip, causing instability or tungsten contamination of the weld. For thinner work or different setups, you'd adjust by using a smaller tungsten or different current.

5. Does partial release mean that not all duct can be efficiently shipped?

- A. No
- B. Sometimes
- C. Yes**
- D. Always

Release status in a fabrication/shipping workflow determines what can be shipped. Partial release means only part of the duct is cleared for shipment; the rest remains in process. Because shipping can include only released items, you cannot ship the entire duct set in one go. That means some duct pieces will have to wait or be shipped in separate lots, reducing overall shipping efficiency. So the best answer is Yes. The other choices don't fit: No would imply everything is released; Always would ignore the staged nature of release; Sometimes is vague, whereas partial release explicitly causes a gap between what's released and what remains to be released, creating inefficiency.

6. Nail-in anchors are rated from 500-1,500 pounds for a tensile load in concrete.

- A. Nail-in anchors are rated for horizontal loads only.
- B. Nail-in anchors are rated from 100-300 pounds for a tensile load in concrete.
- C. Nail-in anchors are rated for tensile loads in concrete but not specified in range.
- D. Nail-in anchors are rated from 500-1,500 pounds for a tensile load in concrete.**

Nail-in anchors are evaluated by their tensile (pull) capacity in concrete, not by horizontal loading alone. The published ratings reflect how much axial load the anchor can safely carry in tension, and for nail-in anchors that capacity typically falls in a 500 to 1,500 pound range. The exact value depends on the specific anchor size, embedment depth, concrete strength, and installation quality. That's why stating a range of 500–1,500 pounds for a tensile load in concrete accurately describes their performance. Other statements don't match how these anchors are rated: some imply only horizontal loads, some give a much smaller or unspecified range. Always use the manufacturer's data for the exact anchor you're using.

7. Which set of drawings would you consult to understand load-bearing elements and columns within a building?

- A. Architectural drawings
- B. Mechanical drawings
- C. Structural drawings**
- D. Electrical drawings

Understanding where load-bearing elements and columns are located comes from structural drawings. These drawings lay out the building's framework, showing column lines and sizes, beam and girder placements, floor systems, and foundations. They include notes on materials, reinforcement details, and how loads travel from floors down to the foundation, which is exactly what you need to identify every critical support point in the structure. Architectural drawings focus on room layout, finishes, and aesthetics, not the structural capacity or exact locations of supports. Mechanical drawings cover equipment and piping, while electrical drawings map circuits and devices. So for locating load-bearing elements and columns, refer to the structural drawings.

8. What can happen when tightly stacked materials are stored on a jobsite?

- A. Moisture can condense between the sheets causing discoloration or premature corrosion.**
- B. They become lighter and easier to move.
- C. They improve air circulation around sheets.
- D. They repel moisture.

Moisture management is crucial for stored sheet materials. When sheets are tightly stacked, the spaces between them have little air flow, so humidity gets trapped and cannot dry out. If temperatures rise or humidity is high, the moisture in the air can condense on the metal surfaces between the sheets. That condensation causes discoloration and can start corrosion long before the material is used. Tight stacks also block ventilation, letting moisture linger even longer. This scenario wouldn't make the sheets lighter or easier to move, nor would it improve air circulation or repel moisture. To reduce the risk, keep gaps between sheets with spacers or separators, store in a dry, ventilated area, and cover with breathable protection to allow moisture to escape.

9. Which plastic category is commonly used in reinforced composites?

- A. Thermoplastic
- B. Elastomer
- C. Thermoset**
- D. Bioplastic

Reinforced composites rely on a matrix that binds fibers and transfers load to them. Thermoset resins fit this role best because, once cured, they form a rigid, crosslinked network that provides high stiffness, strength, and excellent thermal and environmental resistance. This strong, stable matrix bonds well with fibers such as carbon or glass, giving the composite its structural integrity and dimensional stability under load and heat. Elastomers are too soft for structural reinforcement, and while thermoplastics can be used in some composites, they don't typically offer the same combination of stiffness and heat resistance as thermosets for high-performance structural parts. Bioplastics aren't generally chosen for reinforced structural composites due to performance and processing constraints. So the commonly used category is thermoset.

10. What standards should be followed when welding with FCAW?

A. OSHA CFR 1926 Subpart J, OSHA CFR 1910 Subpart Q, ANSI Z49.1

B. NFPA 70, ANSI A20.0, OSHA CFR 1910 Subpart P

C. ASME Boiler Code, AWS D1.1, ISO 9001

D. EPA 40 CFR Part 63, OSHA CFR 1910 Subpart Q, ANSI Z49.1

Welding with FCAW requires following safety standards that apply to welding operations across different work environments, plus a clear safety guideline to bind practice together. The best set includes OSHA's construction welding safety rules (1926 Subpart J) and OSHA's general industry welding safety rules (1910 Subpart Q), together with ANSI Z49.1, which provides practical safety guidelines for welding, cutting, and allied processes. This combination covers the protections, PPE, ventilation, fire prevention, and safe work practices needed for FCAW in both construction and general industry settings. The other options mix in standards that aren't specifically about welding safety (like electrical codes or boiler codes) or address areas like quality management or environmental regulations, which don't directly govern the day-to-day safety practices of FCAW.

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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:

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

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