

NAVY AVIATION STRUCTURAL MECHANIC (AM) PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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. What is the purpose of stakes and stake plates in metal forming?**
 - A. To support heavy machinery
 - B. To back up sheet metal when forming different curves, angles, and seams
 - C. To cut and trim metal pieces
 - D. To hold the metal in place during welding
- 2. What is a significant concern regarding sealants used in repairs?**
 - A. Cost and availability
 - B. Durability and weather resistance
 - C. Toxicity and flammability
 - D. Adhesion and bonding strength
- 3. In what situation would a raised head rivet be most suitable?**
 - A. Where the aesthetic appearance is critical
 - B. Where aerodynamics are not a major factor
 - C. Where strong structural support is needed
 - D. Where weight reduction is a priority
- 4. When would an arbor press be primarily used?**
 - A. For pressing heavy equipment
 - B. For light duty work such as pressing bearing races and bushings
 - C. For cutting and shaping metal sheets
 - D. For welding pieces of metal together
- 5. What does a flush patch typically consist of?**
 - A. Filler thicker than the skin
 - B. Filler made from different alloys
 - C. Filler same thickness and alloy as skin
 - D. Filler that does not require a doubler
- 6. Which machine is designed for both flat sheet metal and cylindrical work?**
 - A. Cornice brake
 - B. Arbor press
 - C. Hydraulic press
 - D. Rotary machine

- 7. What is the primary function of a cleco fastener?**
- A. To permanently bond metal parts
 - B. To temporarily secure parts in position for drilling
 - C. To align components for welding
 - D. To serve as a weight support during assembly
- 8. What is the maximum material thickness that aviation snips can cut?**
- A. 0.050 inch aluminum
 - B. 0.062 inch aluminum
 - C. 0.075 inch aluminum
 - D. 0.100 inch aluminum
- 9. After installation, what is a jo-bolt considered to be?**
- A. A temporary part of the aircraft structure
 - B. Removeable fastener
 - C. A permanent part of the aircraft structure
 - D. None of the above
- 10. Which component is NOT part of a cornice brake?**
- A. Bending leaf handle
 - B. Clamping bar handle
 - C. Adjustable stop
 - D. Belt sander

Answers

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

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Explanations

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1. What is the purpose of stakes and stake plates in metal forming?

- A. To support heavy machinery
- B. To back up sheet metal when forming different curves, angles, and seams**
- C. To cut and trim metal pieces
- D. To hold the metal in place during welding

The purpose of stakes and stake plates in metal forming is to back up sheet metal when forming different curves, angles, and seams. Stakes are typically fixed devices that provide a solid surface against which the metal can be shaped. This support is essential because it allows for precise manipulation of the metal as it is formed, ensuring that curves and angles are created accurately and consistently. The design of stakes can vary depending on the specific forming task, allowing for a range of shapes and profiles to be achieved in the metal. This method is particularly useful in sheet metal work, where precision is key to achieving the desired final shape and maintaining structural integrity.

2. What is a significant concern regarding sealants used in repairs?

- A. Cost and availability
- B. Durability and weather resistance
- C. Toxicity and flammability**
- D. Adhesion and bonding strength

The significant concern regarding sealants used in repairs centers around toxicity and flammability. Many sealants contain chemicals that can emit harmful vapors or present a fire hazard when exposed to certain conditions. When working with sealants, especially in enclosed spaces such as aircraft, it is crucial to be aware of the potential for toxic exposure, which can affect both safety and health. Furthermore, the flammable nature of some sealants represents a serious risk during application or if they are subjected to heat. Understanding these hazards is essential for anyone involved in repairs, as safety protocols must be adhered to when handling materials that may release toxic fumes or ignite. This awareness helps maintain a safe working environment and ensures compliance with safety regulations during aircraft maintenance and repair processes.

3. In what situation would a raised head rivet be most suitable?

- A. Where the aesthetic appearance is critical
- B. Where aerodynamics are not a major factor**
- C. Where strong structural support is needed
- D. Where weight reduction is a priority

A raised head rivet is most suitable in situations where aerodynamics are not a major factor. Raised head rivets, also known as flush rivets, have heads that may protrude slightly above the surface of the material they are fastened to. This design can disrupt airflow and create drag if used in critical aerodynamic applications, such as in the leading edges of wings or fuselage sections where smooth surfaces are essential for reducing drag. In contexts where aerodynamics are of less importance, such as in certain internal structures or non-critical components, raised head rivets can be effectively used. They provide good mechanical strength and durability, making them suitable for applications where the strength of the joint is a priority, but the smoothness of the surface is less of a concern. This understanding aligns with factors influencing the choice of rivet type based on the specific conditions of the application, underscoring the importance of considering aerodynamic effects in aviation structural design.

4. When would an arbor press be primarily used?

- A. For pressing heavy equipment
- B. For light duty work such as pressing bearing races and bushings**
- C. For cutting and shaping metal sheets
- D. For welding pieces of metal together

An arbor press is specifically designed for light to medium duty tasks, particularly in the domains of metalworking and assembly. Its fundamental use involves applying a precise amount of force to achieve accurate positioning and fitting of components. One of the most common applications is pressing bearing races and bushings, as this requires controlled pressure to avoid damaging the components. The arbor press enables the user to leverage mechanical advantage, making it easy to perform tasks that necessitate accuracy without applying excessive force that could lead to equipment damage or misalignment. This attribute makes it particularly suitable for delicate operations like fitting bearing components, where precision is critical. In contrast, heavy equipment pressing typically requires more robust hydraulic or pneumatic presses that can withstand greater loads, which the arbor press is not designed for. Other options like cutting and shaping metal sheets are tasks that would involve different tools such as shears or hydraulic brakes, and welding involves the application of heat rather than pressing, ruling them out as appropriate uses for an arbor press.

5. What does a flush patch typically consist of?

- A. Filler thicker than the skin
- B. Filler made from different alloys
- C. Filler same thickness and alloy as skin**
- D. Filler that does not require a doubler

A flush patch is designed to repair damage on aircraft surfaces in a way that maintains the aerodynamic profile and structural integrity of the surrounding aircraft skin. The correct answer, which states that the filler should be the same thickness and alloy as the skin, is essential for several reasons. Using a filler that matches the thickness of the original skin ensures a smooth, even surface that can withstand the same stresses and strains as the surrounding material. If the filler were thicker, it could disrupt airflow, leading to turbulence that might affect the performance of the aircraft. Additionally, matching the alloy is crucial for maintaining compatibility in terms of mechanical properties and corrosion resistance. Different alloys can exhibit differing rates of expansion and contraction, which could introduce stresses at the patch boundary, leading to potential failure over time. In summary, consistency in both thickness and alloy for the filler in a flush patch is necessary to ensure that the repair is effective and that the structural and aerodynamic performance of the aircraft is not compromised.

6. Which machine is designed for both flat sheet metal and cylindrical work?

- A. Cornice brake
- B. Arbor press
- C. Hydraulic press
- D. Rotary machine**

The rotary machine is specifically designed to handle both flat sheet metal and cylindrical work due to its adjustable tooling and ability to perform various operations like bending, rolling, and shaping. This versatility makes it suitable for a wide range of applications, allowing for the processing of flat materials into curved forms without the need for multiple setup changes. Its design encourages efficient transition between different types of workpieces, which is particularly advantageous in metalworking environments where both shapes are frequently utilized. The cornice brake, although effective for bending flat metal into various angles, does not facilitate cylindrical work as effectively. The arbor press is primarily used for press-fitting and does not specialize in shaping metal. The hydraulic press is very powerful and useful for various pressing tasks but is not specifically geared toward both flat and cylindrical specifications in the same versatile manner as a rotary machine.

7. What is the primary function of a cleco fastener?

- A. To permanently bond metal parts
- B. To temporarily secure parts in position for drilling**
- C. To align components for welding
- D. To serve as a weight support during assembly

The primary function of a cleco fastener is to temporarily secure parts in position for drilling. Cleco fasteners are designed to hold metal components tightly together while ensuring that they are properly aligned, allowing for processes such as drilling, riveting, or other assembly tasks to be performed accurately. Their temporary nature means that they can be easily removed once the final fastening process is completed, allowing for adjustments and ensuring that the parts can be permanently joined without distortion or misalignment. Cleco fasteners are particularly useful because they provide a quick and efficient way to hold parts in place without causing permanent changes to the materials involved. This is crucial in the aviation industry where precision and quality control are paramount. While aligning components for welding and serving as weight supports during assembly may be secondary outcomes of using cleco fasteners, these are not their primary intended functions. The clecos ensure that the parts remain in the correct position until any permanent attachment is made, highlighting their importance in the temporary fastening context during assembly processes.

8. What is the maximum material thickness that aviation snips can cut?

- A. 0.050 inch aluminum**
- B. 0.062 inch aluminum
- C. 0.075 inch aluminum
- D. 0.100 inch aluminum

Aviation snips are specifically designed for cutting thin sheets of metal, particularly aluminum and other soft materials, in a precise and efficient manner. The maximum material thickness that aviation snips can typically handle is around 0.050 inch for aluminum. This capability allows aviation personnel to perform detailed metal work required in aircraft maintenance and repair without compromising the integrity of the material. Using aviation snips to cut thicker aluminum, such as 0.062 inch or beyond, could lead to difficulty in cutting due to the increased resistance and may damage the snips or the material itself. Thus, limiting the use of these tools to lighter materials ensures optimal performance and safety during operations.

9. After installation, what is a jo-bolt considered to be?

- A. A temporary part of the aircraft structure
- B. Removeable fastener
- C. A permanent part of the aircraft structure**
- D. None of the above

A jo-bolt is considered a permanent part of the aircraft structure after installation. Unlike temporary fasteners that can be easily removed and replaced, jo-bolts are designed to provide a long-lasting and robust connection within the airframe. Their primary function is to secure structural components in a way that can endure the operational stresses encountered during flight. This permanence is crucial for maintaining the integrity and safety of the aircraft. Understanding the role of jo-bolts within the aircraft's structure emphasizes the importance of proper installation procedures and ongoing maintenance. Since they are intended to remain in place throughout the lifespan of the aircraft, the correct material and torque requirements must be adhered to when they are installed to ensure the reliability of the connection under various operational conditions. This knowledge is vital for anyone working as an Aviation Structural Mechanic, as the safety and performance of the aircraft depend significantly on the integrity of these structural fasteners.

10. Which component is NOT part of a cornice brake?

- A. Bending leaf handle
- B. Clamping bar handle
- C. Adjustable stop
- D. Belt sander**

The component that does not belong to a cornice brake is the belt sander. A cornice brake is a specialized tool used in metalworking for bending sheet metal. It typically consists of several parts that enable precise bending of materials, including a bending leaf handle, which allows the operator to control the bending action, a clamping bar handle that secures the metal in place during the bending process, and an adjustable stop that helps achieve accurate and repeatable bends. The belt sander, on the other hand, is a different tool primarily used for sanding and smoothing surfaces of materials, rather than shaping or bending them. It does not perform any functions related to the bending of sheet metal, which is the primary purpose of a cornice brake. Understanding the specific functions and components of tools used in metalworking is essential to selecting the correct tool for a particular task.

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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