

FAA Assembly & Rigging Practice Test (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

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- 1. How does the position of the center of gravity affect performance?**
 - A. It enhances fuel efficiency**
 - B. It influences stability and control**
 - C. It adjusts the engine throttle response**
 - D. It affects cargo space**

- 2. What is the expected strength of a swaged terminal if all manufacturer's instructions are followed when swaging a cable terminal?**
 - A. 75% of the rated strength of the cable**
 - B. 90% of the rated strength of the cable**
 - C. 100% of the rated strength of the cable**
 - D. 110% of the rated strength of the cable**

- 3. What maintenance tasks are typically performed after rigging an aircraft?**
 - A. Only visual inspections**
 - B. Functional tests and verification of control surface movement**
 - C. Engine diagnostics**
 - D. Fuel system checks**

- 4. How does improper rigging of the right wing of a monoplane affect the aircraft?**
 - A. It leads to improved overall performance**
 - B. It causes the airplane to be off balance both laterally and directionally**
 - C. It enhances fuel efficiency during flight**
 - D. It results in better aerodynamic efficiency**

- 5. Which component's assembly is crucial for maintaining the aircraft's stability during landings?**
 - A. Wing flaps**
 - B. Propellers**
 - C. Landing gear**
 - D. Fuel tanks**

- 6. What will happen to the cable tension in an all-metal aircraft rigged to correct tension in a heated hangar when operated in very cold weather?**
- A. Increase as the aircraft cools**
 - B. Decreases when the aircraft structure and cables become cold**
 - C. Remain unchanged regardless of temperature**
 - D. Become erratic, varying with the temperature**
- 7. What is the term used to describe the alignment of wings relative to the fuselage?**
- A. Wing aspect ratio**
 - B. Wing incidence**
 - C. Wing loading**
 - D. Wing sweep**
- 8. As the angle of attack of an airfoil increases, where will the center of pressure likely move?**
- A. Toward the trailing edge**
 - B. Toward the leading edge**
 - C. Directly above the airfoil**
 - D. To the center of the airfoil**
- 9. The elevators of a conventional airplane are used to provide rotation around which axis?**
- A. Longitudinal axis**
 - B. Lateral axis**
 - C. Vertical axis**
 - D. Diagonal axis**
- 10. What aspect of wing dihedral contributes to airplane stability?**
- A. Lateral axis stability**
 - B. Longitudinal axis stability**
 - C. Directional control**
 - D. Pitch control**

Answers

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

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Explanations

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1. How does the position of the center of gravity affect performance?

- A. It enhances fuel efficiency**
- B. It influences stability and control**
- C. It adjusts the engine throttle response**
- D. It affects cargo space**

The position of the center of gravity (CG) plays a critical role in the stability and control of an aircraft. When the CG is located within the designed limits, it contributes to the aircraft's ability to maintain level flight, respond predictably to control inputs, and recover from disturbances. If the CG is too far forward or too far aft, it can lead to handling issues such as increased stall risk, difficulty in maintaining control, and challenges in achieving stable flying conditions. Therefore, understanding and managing the CG position is essential for ensuring that the aircraft operates efficiently and safely. The other choices, while potentially related to aircraft performance, do not specifically capture the primary impact of CG position. For example, while CG can have some indirect effects on fuel efficiency and cargo space, its most significant and direct influence is on the stability and control characteristics of the aircraft, making this the most accurate choice.

2. What is the expected strength of a swaged terminal if all manufacturer's instructions are followed when swaging a cable terminal?

- A. 75% of the rated strength of the cable**
- B. 90% of the rated strength of the cable**
- C. 100% of the rated strength of the cable**
- D. 110% of the rated strength of the cable**

The expected strength of a swaged terminal can be considered as 100% of the rated strength of the cable when all manufacturer's instructions are meticulously followed. This outcome is based on the fact that proper swaging techniques create a strong mechanical connection between the cable and the terminal. Manufacturers design their swaging processes with specific tolerances and procedures that, if adhered to, ensure that the load transfer between the terminal and the cable maximizes the overall strength of the assembly. When a terminal is swaged correctly, the resulting joint is as strong as the cable itself, allowing it to withstand the same loads without any significant reduction in strength. This contrasts with options suggesting lower percentages, which reflect situations that might arise from improper installation or inferior materials, emphasizing the importance of strict adherence to guidelines.

3. What maintenance tasks are typically performed after rigging an aircraft?

- A. Only visual inspections
- B. Functional tests and verification of control surface movement**
- C. Engine diagnostics
- D. Fuel system checks

After rigging an aircraft, it is essential to perform functional tests and verification of control surface movement to ensure that the aircraft is responding correctly to pilot inputs. This involves checking that all control surfaces, such as ailerons, elevators, and rudders, move freely and positively in the desired directions when their corresponding controls are manipulated. These tests verify that the rigging has been correctly configured, ensuring that the control surfaces are properly aligned and connected. Additionally, such checks help identify any potential issues that could affect the aircraft's performance or safety. Visual inspections might be a component of the maintenance routine, but they do not sufficiently confirm the functionality of the control surfaces. Engine diagnostics and fuel system checks, while vital to overall aircraft maintenance, are not specifically related to the rigging process itself and typically would occur as part of routine maintenance rather than directly afterward. Therefore, functional tests and verification of control surface movement are critical tasks performed post-rigging to ensure the aircraft is in a safe and operable condition.

4. How does improper rigging of the right wing of a monoplane affect the aircraft?

- A. It leads to improved overall performance
- B. It causes the airplane to be off balance both laterally and directionally**
- C. It enhances fuel efficiency during flight
- D. It results in better aerodynamic efficiency

Improper rigging of the right wing of a monoplane can significantly compromise the aircraft's performance and handling characteristics. When the wing is not rigged correctly, it can create an imbalance that affects both lateral stability and directional control. This imbalance may cause the aircraft to roll more to one side, requiring constant input from the pilot to maintain level flight. Additionally, this can lead to adverse yaw, where the aircraft tends to turn towards the lower wing due to the differential lift and drag generated between the wings. An aircraft that is off balance in this manner will have difficulty maintaining straight and level flight, resulting in pilot workload increase and potentially hazardous flight conditions. In contrast, the other options suggest improvements to performance, efficiency, or aerodynamic qualities, which are not possible when rigging is incorrect. Proper wing rigging is crucial for ensuring the aircraft reacts predictably and safely during all phases of flight.

5. Which component's assembly is crucial for maintaining the aircraft's stability during landings?

- A. Wing flaps**
- B. Propellers**
- C. Landing gear**
- D. Fuel tanks**

The assembly of the landing gear is crucial for maintaining the aircraft's stability during landings. The landing gear supports the weight of the aircraft during touchdown and allows for a controlled transition from flight to ground. It plays a vital role in absorbing the impact forces of landing and ensuring that the aircraft remains stable and balanced on the runway. Properly assembled and functioning landing gear help prevent skidding, tipping, or bouncing during landing, which can lead to loss of control. While wing flaps, propellers, and fuel tanks are important components of an aircraft, they do not directly influence stability during the landing phase in the same way that landing gear does. Wing flaps are primarily used to increase lift and control at lower speeds but are not responsible for ground stability. Propellers provide thrust and are essential for flight but do not contribute to stability upon landing. Fuel tanks, while critical for providing necessary fuel for flight, do not have a role in the physical support or stability of the aircraft during landing. Thus, landing gear assembly is the key component for ensuring stability during this critical phase of flight.

6. What will happen to the cable tension in an all-metal aircraft rigged to correct tension in a heated hangar when operated in very cold weather?

- A. Increase as the aircraft cools**
- B. Decreases when the aircraft structure and cables become cold**
- C. Remain unchanged regardless of temperature**
- D. Become erratic, varying with the temperature**

In an all-metal aircraft, the materials used for both the structure and the cables have properties that respond predictably to temperature changes. As the temperature decreases, the metal components, including the cables and the airframe, contract. This contraction leads to a reduction in the length of the cables, which decreases their tension. When an aircraft is rigged to a specific tension in a heated hangar, it is adjusted while the materials are expanded due to the heat. Once the aircraft is taken into very cold weather, the subsequent cooling causes both the aircraft structure and the cables to contract. Consequently, the tension in the cables will decrease because they are effectively becoming shorter and tighter as opposed to being elongated in warmer conditions. Therefore, the tension in the cables will specifically decrease when exposed to colder temperatures, making this the correct and logical answer. The other options do not accurately describe the physical principles at play regarding metal compression and tension in response to temperature changes.

7. What is the term used to describe the alignment of wings relative to the fuselage?

- A. Wing aspect ratio**
- B. Wing incidence**
- C. Wing loading**
- D. Wing sweep**

The term that describes the alignment of wings relative to the fuselage is wing incidence. This refers to the angle at which the wing is attached to the fuselage and is a critical factor in determining the aircraft's aerodynamic performance. Wing incidence affects lift, drag, and overall stability during flight. When a wing is mounted with a positive incidence, it means that the leading edge of the wing is tilted upward relative to the fuselage, which can enhance lift at lower speeds. Conversely, if the wing has a negative incidence, the leading edge is tilted downward, which can influence handling characteristics and performance during various flight phases. Understanding wing incidence is paramount for aircraft design and flight safety, as it plays a significant role in how the aircraft behaves in the air, particularly in terms of its ability to generate lift and operate efficiently across different flight conditions.

8. As the angle of attack of an airfoil increases, where will the center of pressure likely move?

- A. Toward the trailing edge**
- B. Toward the leading edge**
- C. Directly above the airfoil**
- D. To the center of the airfoil**

As the angle of attack of an airfoil increases, the center of pressure typically moves toward the leading edge. This phenomenon occurs because, as the angle of attack rises, the airflow over the airfoil changes, leading to an increase in the pressure difference between the upper and lower surfaces. This shift in pressure results in the center of pressure moving forward. When the angle of attack increases, the flow separation point moves further back on the airfoil due to the increased lift generated. Consequently, more lift is produced on the upper surface, and the force vector associated with lift tends to move forward, thus relocating the center of pressure closer to the leading edge. Understanding this behavior is crucial in designing airfoils and predicting their performance at various angles of attack, as it affects stability and control of the aircraft.

9. The elevators of a conventional airplane are used to provide rotation around which axis?

- A. Longitudinal axis**
- B. Lateral axis**
- C. Vertical axis**
- D. Diagonal axis**

The elevators of a conventional airplane are specifically designed to control the pitch of the aircraft, which is the rotation around the lateral axis. When the pilot moves the control yoke or stick forward or backward, it adjusts the elevators' position, causing the aircraft's nose to rise or fall. This pitch control is essential for climbing or descending during flight. In contrast, the other axes have distinct roles. The longitudinal axis runs from the nose to the tail of the aircraft and is involved in roll movements controlled by the ailerons. The vertical axis relates to yaw movements, controlled by the rudder. The diagonal axis is not a standard term used in aviation for describing aircraft movement, making it irrelevant in this context. Understanding the function of the elevators and their relationship to the lateral axis is crucial for grasping how aircraft maneuver in flight.

10. What aspect of wing dihedral contributes to airplane stability?

- A. Lateral axis stability**
- B. Longitudinal axis stability**
- C. Directional control**
- D. Pitch control**

Wing dihedral primarily contributes to lateral stability, not longitudinal stability, which is indicated in the provided answer. The correct choice reflects the role of wing dihedral in enhancing an aircraft's stability around its lateral axis. When an aircraft experiences a roll due to turbulence or other disturbances, the dihedral angle causes a difference in lift between the wings. For example, if one wing drops, the wing with a higher dihedral angle generates more lift, helping to right the aircraft back to level flight. This characteristic allows pilots to maintain control and increases the aircraft's overall stability during flight. In understanding how other options relate, lateral axis stability specifically pertains to an aircraft's ability to maintain a level flight attitude without rolling or yawing unexpectedly. Longitudinal stability, on the other hand, is largely governed by the horizontal stabilizer's position and effectiveness. Directional control is generally managed through the rudder and ailerons, while pitch control primarily involves the elevator's adjustments and the aircraft design related to the center of gravity. These relationships highlight that while dihedral plays a crucial role, it is directly linked to lateral axis stability, which is essential for the safe operation of an aircraft.

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://faaassemblyrigging.examzify.com>

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

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