

SIFT ARMY AVIATION INFORMATION PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
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. Which section includes both technical and flight-related knowledge?**
 - A. Aviation Information
 - B. Mathematics Skills
 - C. Reading Comprehension
 - D. Physical Fitness
- 2. What should a pilot do if the heading begins to change during a vertical takeoff to a hover?**
 - A. Slowly adjust the anti-torque pedals
 - B. Increase throttle to regain heading
 - C. Decrease collective to stabilize
 - D. Perform a hovering turn
- 3. What are the consequences of overloading a helicopter?**
 - A. Increased fuel efficiency
 - B. Enhanced stability
 - C. Decreased performance and structural damage
 - D. Greater lift capacity
- 4. When generating lift, how should the pressure below the airfoil compare to the pressure above it?**
 - A. Less than it
 - B. Equal to it
 - C. Greater than it
 - D. Unrelated to it
- 5. What changes to lift dynamics occur on the advancing side of the rotor blade?**
 - A. It decreases as centripetal force applies.
 - B. It increases due to a larger angle of attack.
 - C. It remains constant across the rotor disk.
 - D. It varies only on the retreating blades.

- 6. Which method would best correct an aft loaded center of balance in a helicopter?**
- A. Adding cargo to the back of the helicopter
 - B. Applying additional forward cyclic
 - C. Increasing the throttle
 - D. Removing cargo from the back of the helicopter
- 7. From a physics perspective, through which point does the total weight of a helicopter act?**
- A. The center of motion
 - B. The center of gravity
 - C. The longitudinal axis
 - D. The base of the rotor
- 8. Which section evaluates spatial reasoning skills on the SIFT exam?**
- A. Mechanical Comprehension
 - B. Listening and comprehension
 - C. Spatial Reasoning
 - D. Aviation Information
- 9. What is the primary effect of lowering the collective while in flight?**
- A. Pitches the nose up
 - B. Increases airspeed
 - C. Reduces lift
 - D. Decreases throttle
- 10. What is the ideal preparation timeline for the SIFT exam?**
- A. Start preparing at least a few months in advance
 - B. Prepare one week before the exam
 - C. Only prepare if you feel unprepared
 - D. Start preparing one year in advance

Answers

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

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Explanations

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1. Which section includes both technical and flight-related knowledge?

- A. Aviation Information**
- B. Mathematics Skills
- C. Reading Comprehension
- D. Physical Fitness

The section that includes both technical and flight-related knowledge is Aviation Information. This section is specifically designed to cover a broad range of topics that are vital for understanding aviation concepts, procedures, and systems. It incorporates knowledge related to aircraft operations, aviation regulations, navigation, and aerodynamics, as well as the necessary technical skills required for safe and effective flying. In contrast, Mathematics Skills focuses primarily on numerical proficiency and problem-solving related to math concepts, which although important in aviation, does not encompass the full breadth of aviation-related knowledge. Reading Comprehension emphasizes the ability to understand and interpret written material, but does not specifically address the technical knowledge vital to flight operations. Physical Fitness relates to the required physical capabilities for handling the demands of flying but does not concern itself with the technical aspects needed for aviation knowledge. Thus, Aviation Information is the correct choice for a section that encompasses both the technical and flight-related knowledge necessary for effective performance in an aviation context.

2. What should a pilot do if the heading begins to change during a vertical takeoff to a hover?

- A. Slowly adjust the anti-torque pedals**
- B. Increase throttle to regain heading
- C. Decrease collective to stabilize
- D. Perform a hovering turn

In a vertical takeoff to a hover, if the heading begins to change, the pilot needs to maintain directional control of the helicopter. One of the primary methods to control heading during hover is the use of anti-torque pedals. The anti-torque pedals are designed to counteract the torque produced by the main rotor system, which can cause the helicopter to yaw or spin. When the heading changes, a slow and measured adjustment of the anti-torque pedals will help stabilize the helicopter's yaw movement. This adjustment allows the pilot to return to the desired heading without introducing additional complications or excessive movements that could lead to a loss of control. Using the pedals smoothly is crucial, as abrupt changes can lead to overcorrection and undesirable flight dynamics. The other options, while relevant in other contexts, do not directly address the need for maintaining heading control during a hover. Increasing throttle or decreasing collective can lead to unwanted changes in altitude or speed, which may compound stability issues rather than resolve the heading deviation. Performing a hovering turn is also not directly related to correcting an unwanted heading change but rather is a maneuver used for specific directional changes.

3. What are the consequences of overloading a helicopter?

- A. Increased fuel efficiency
- B. Enhanced stability
- C. Decreased performance and structural damage**
- D. Greater lift capacity

Overloading a helicopter leads to a decrease in performance and can cause structural damage. When a helicopter is loaded beyond its maximum weight capacity, it struggles to maintain optimal flight characteristics. This overload affects various operational aspects, including climb rates, maneuverability, and overall responsiveness of the aircraft. The increased weight can lead to longer takeoff distances and reduced ability to gain altitude. Moreover, the structural components of the helicopter are designed to withstand specific weight limits. Exceeding these limits can result in undue stress on the airframe and other critical parts, potentially causing failures such as cracks or bends that compromise the aircraft's integrity. Ultimately, overloading can not only affect flight safety but also lead to costly repairs and maintenance issues. Understanding these consequences highlights the importance of adhering to weight limits to ensure safe and efficient helicopter operations.

4. When generating lift, how should the pressure below the airfoil compare to the pressure above it?

- A. Less than it
- B. Equal to it
- C. Greater than it**
- D. Unrelated to it

To generate lift, the pressure below the airfoil must be greater than the pressure above it. This principle is rooted in Bernoulli's equation, which states that an increase in the speed of a fluid occurs simultaneously with a decrease in pressure. As air flows over the curved upper surface of an airfoil, it travels faster compared to the air beneath the flat bottom surface. This increased velocity leads to lower pressure above the airfoil and a relative higher pressure beneath it. The resulting pressure differential creates the lift force that allows the aircraft to rise and maintain flight. The greater the difference in pressure between the lower and upper surfaces, the greater the lift generated. The other options do not accurately represent this relationship: if the pressure above the airfoil is equal to or greater than the pressure below, or if they are unrelated, lift would not be effectively generated, and the aircraft would not be able to rise or sustain flight as needed.

5. What changes to lift dynamics occur on the advancing side of the rotor blade?

- A. It decreases as centripetal force applies.
- B. It increases due to a larger angle of attack.**
- C. It remains constant across the rotor disk.
- D. It varies only on the retreating blades.

The correct answer highlights a critical aspect of rotor dynamics in helicopter flight. On the advancing side of the rotor blade, lift dynamics increase primarily due to a larger angle of attack. As the rotor blade moves forward through the air, the advancing blade encounters increased airflow and, often, an increased angle of attack relative to the incoming wind. This combination enhances lift production because a higher angle of attack generally leads to a larger lift coefficient, provided it does not exceed the critical angle where stall may occur. Additionally, as the rotor blade progresses through its rotation, the advancing side benefits from the rotational speed combined with the forward speed of the helicopter. This effectively increases the relative velocity and accelerates airflow over the airfoil, contributing to a higher lift generation compared to other areas of the rotor disk. In contrast, the other options do not accurately capture the dynamics at play on the advancing side. The centripetal force does not directly cause a decrease in lift on this side, and lift is not constant across the rotor disk due to varying angles of attack and airflow conditions. Finally, the retreating blades experience different dynamics, predominantly characterized by a decrease in lift due to adverse pressure gradients and lower effective angles of attack, which are distinct from the characteristics of the advancing blades

6. Which method would best correct an aft loaded center of balance in a helicopter?

- A. Adding cargo to the back of the helicopter
- B. Applying additional forward cyclic
- C. Increasing the throttle
- D. Removing cargo from the back of the helicopter**

To correct an aft loaded center of balance in a helicopter, the most effective method is to remove cargo from the back of the helicopter. An aft center of balance occurs when the weight distribution of the helicopter is too far rearward, which can negatively affect stability and control. By removing cargo from the back, you are effectively shifting the weight forward, bringing the center of gravity back toward a more balanced position. This balance is critical for maintaining optimal flight performance and ensuring that the helicopter handles correctly. An aft center of gravity can lead to difficulties in pitch control, especially during maneuvers, making it essential to address this issue promptly. While adding cargo to the back would further exacerbate the problem, applying additional forward cyclic is a way to counteract the effects of an aft center of balance in flight, rather than correcting the weight distribution itself. Increasing the throttle, on the other hand, does not affect the center of balance but may alter the performance dynamics of the helicopter during flight, which is not a solution to the loading issue. Therefore, removing cargo is indeed the best corrective action for an aft loaded center of balance.

7. From a physics perspective, through which point does the total weight of a helicopter act?

- A. The center of motion
- B. The center of gravity**
- C. The longitudinal axis
- D. The base of the rotor

The total weight of a helicopter acts through its center of gravity. The center of gravity is the point at which the entire weight of the aircraft can be considered to act, meaning that the helicopter's weight is evenly distributed around this point. Understanding this concept is crucial because the center of gravity affects the aircraft's stability and control. If the center of gravity is not positioned correctly, it can lead to difficulties in handling and could potentially impact the safety and performance of the helicopter during flight. This center is determined by the distribution of mass within the craft and is influenced by factors such as the placement of fuel, payload, and equipment. Recognizing that the weight acts through the center of gravity informs pilots and engineers about necessary adjustments and configurations for balancing the helicopter effectively during operation. This understanding is key in both design and operational scenarios, ensuring that the helicopter remains stable and controllable during various flight maneuvers.

8. Which section evaluates spatial reasoning skills on the SIFT exam?

- A. Mechanical Comprehension
- B. Listening and comprehension
- C. Spatial Reasoning**
- D. Aviation Information

The section that evaluates spatial reasoning skills on the SIFT exam is specifically designed to assess how well an individual can visualize and manipulate objects in a three-dimensional space. This is crucial for roles in aviation where understanding spatial relationships is essential, such as piloting and navigation. Spatial reasoning encompasses the ability to think about objects in different dimensions, recognizing how they relate to one another and predicting their movements or configurations when viewed from various angles. This skill is vital for tasks such as interpreting aviation charts, understanding cockpit layouts, and making in-flight decisions that require a strong grasp of spatial dynamics. While other sections, like Mechanical Comprehension, may evaluate related skills, they primarily focus on understanding mechanical concepts rather than the specific spatial relationships involved. Therefore, the Spatial Reasoning section directly targets the ability to process and analyze spatial information, making it the correct choice for this question.

9. What is the primary effect of lowering the collective while in flight?

- A. Pitches the nose up
- B. Increases airspeed
- C. Reduces lift**
- D. Decreases throttle

Lowering the collective while in flight primarily reduces lift. The collective control in a helicopter is used to manage the pitch angle of all the rotor blades, which directly affects the amount of lift generated. By lowering the collective, the pitch angle of the rotor blades is decreased, resulting in less lift being produced. This action can lead to a gradual descent, as the forces acting against gravity are diminished. Understanding this function is crucial for pilots to manage flight dynamics effectively. Maintaining the right balance of lift is particularly important during various phases of flight, such as transitions or when performing maneuvers that require altitude adjustments. Using the collective effectively allows pilots to respond to changes in air conditions and maneuver the helicopter safely and efficiently.

10. What is the ideal preparation timeline for the SIFT exam?

A. Start preparing at least a few months in advance

B. Prepare one week before the exam

C. Only prepare if you feel unprepared

D. Start preparing one year in advance

Starting preparation for the SIFT exam at least a few months in advance is ideal because it allows sufficient time to cover all necessary material comprehensively. Preparing in advance provides the opportunity to gradually build a solid foundation in the required topics, such as aviation knowledge, math, and reading comprehension skills. This timeline accommodates not only the studying of theoretical concepts but also gives learners the chance to engage in consistent practice through sample questions and review sessions. Spacing out the study sessions over several months can help solidify understanding and retention, reducing the stress that often accompanies last-minute cramming. It also allows time to identify any areas of weakness, so additional focus can be applied where needed, enhancing overall performance potential on the exam day. The other options would not provide a robust framework for mastering the content. Preparing just one week in advance limits the ability to fully engage with the material, and waiting until you feel unprepared can lead to unnecessary stress and ineffective studying. Starting a year in advance may be excessive for many candidates, potentially leading to burnout before the exam occurs, making it less practical for effective preparation.

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://sift-armyaviation.examzify.com>

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

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