

SIFT Army Aviation Information Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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SAMPLE

Questions

- 1. What strategy can help when facing challenging questions on the SIFT?**
 - A. Guessing without consideration**
 - B. Eliminating obvious incorrect answers to improve chances**
 - C. Focusing solely on time management**
 - D. Asking for clarification on the question**
- 2. Which skill is a significant focus of the Mechanical Comprehension section?**
 - A. Calculating distances and angles**
 - B. Understanding mechanical and physical science principles**
 - C. Evaluating written aviation procedures**
 - D. Interpreting graphical information**
- 3. How important is mechanical reasoning for someone pursuing Army Aviation?**
 - A. Very important, as it helps understand aircraft systems and operations**
 - B. Not very important, as pilot skills are prioritized**
 - C. Somewhat important, but less so than navigation skills**
 - D. Critical only for maintenance roles**
- 4. What type of questions are included in the Mechanical Comprehension section of the SIFT?**
 - A. Questions about mathematics and calculations**
 - B. Questions regarding basic principles of mechanics and physical science**
 - C. Questions about historical aviation events**
 - D. Questions on aircraft navigation systems**
- 5. How does a pilot control the helicopter's nose to turn left or right?**
 - A. Pushing down on the collective for left motion and pulling up on it to turn right.**
 - B. Tilting the main rotor disk left or right while keeping the pedals neutral.**
 - C. Pushing on the left or right pedal while adjusting the cyclic to compensate for greater rotational drag.**
 - D. Pushing on the corresponding pedal.**

- 6. How can understanding aerodynamics benefit SIFT candidates?**
- A. It provides insight into flight routes**
 - B. It enhances comprehension of flight principles tested in the Aviation Information section**
 - C. It simplifies the math calculations**
 - D. It reduces study time needed for the exam**
- 7. What can primary pitch control in a helicopter affect?**
- A. The rotor disk's angle of attack**
 - B. The tail rotor's thrust direction**
 - C. The altitude impact of induced drag**
 - D. The forward speed of the helicopter**
- 8. During a hovering turn, which of the following factors must remain consistent to ensure safety?**
- A. Heading**
 - B. Altitude**
 - C. Ground speed**
 - D. Visual cues**
- 9. What is an effective way to prepare for the Reading Comprehension section of the SIFT?**
- A. Memorizing vocabulary words**
 - B. Practicing reading various texts and summarizing main ideas**
 - C. Studying previous SIFT exams**
 - D. Focusing exclusively on technical manuals**
- 10. If the helicopter's nose drops while flying and the cyclic is neutral, what is likely causing this?**
- A. Trim is improperly set**
 - B. The helicopter is too heavy**
 - C. Fuel in the rear is being used up**
 - D. Airspeed is too low**

Answers

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

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Explanations

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1. What strategy can help when facing challenging questions on the SIFT?

- A. Guessing without consideration**
- B. Eliminating obvious incorrect answers to improve chances**
- C. Focusing solely on time management**
- D. Asking for clarification on the question**

Choosing to eliminate obvious incorrect answers to improve chances is a strategic approach that enhances decision-making during the SIFT. When confronted with challenging questions, it is beneficial to analyze the options and identify any that can be confidently ruled out as incorrect. This technique effectively narrows down the choices, which can increase the likelihood of selecting the correct answer from the remaining possibilities. By focusing on the process of elimination, you create a clearer path through the question. Even if you are unsure about the correct answer, reducing the pool of possible choices gives you better odds, and sometimes, it can lead to insight about the right answer based on context or content knowledge. In contrast, guessing without consideration lacks a thought process that could leverage any partial knowledge you have, focusing solely on time management does not address the content of the questions, and asking for clarification may not be feasible in a test environment where you cannot interact with examiners. This tactical method allows you to efficiently use your reasoning skills and maximize your performance on challenging items.

2. Which skill is a significant focus of the Mechanical Comprehension section?

- A. Calculating distances and angles**
- B. Understanding mechanical and physical science principles**
- C. Evaluating written aviation procedures**
- D. Interpreting graphical information**

The significant focus of the Mechanical Comprehension section is on understanding mechanical and physical science principles. This area assesses a candidate's grasp of concepts such as force, friction, leverage, and the behavior of machines in various physical contexts. Mastery of these principles is essential for effectively analyzing mechanical systems and solving related problems, which is a critical skill in aviation and other technical fields. Understanding these underlying principles enables individuals to relate theoretical knowledge to practical applications, which is important for recognizing how various forces and movements affect machinery. This comprehension is crucial not only for operating and maintaining aircraft but also for troubleshooting and problem-solving in mechanical contexts. The other options, while they may contain relevant skills, do not align as closely with the primary focus of mechanical comprehension. For instance, while calculating distances and angles can be part of technical evaluations, it doesn't specifically address mechanical principles. Evaluating written aviation procedures and interpreting graphical information are also valuable skills, however, they pertain more to different areas of aviation training rather than the core mechanical knowledge emphasized in this section.

3. How important is mechanical reasoning for someone pursuing Army Aviation?

- A. Very important, as it helps understand aircraft systems and operations**
- B. Not very important, as pilot skills are prioritized**
- C. Somewhat important, but less so than navigation skills**
- D. Critical only for maintenance roles**

Mechanical reasoning is indeed very important for anyone pursuing a career in Army Aviation, as it enables individuals to understand the complex systems and operations of aircraft. This understanding is crucial not only for pilots but also for all personnel involved in aviation operations, including ground crew and maintenance staff. A solid grasp of mechanical concepts helps in troubleshooting, recognizing how different systems interact, and making informed decisions during operations or in emergency situations. For pilots, mechanical reasoning translates into being able to interpret instrument readings, understand system failures, and respond appropriately to mechanical issues that may arise during flight. Being knowledgeable about how aircraft systems work enhances situational awareness and contributes to safer flight operations. The ability to visualize and reason through mechanical situations leads to effective problem-solving and the skill to maintain optimal performance of the aircraft. While pilot skills are certainly a priority, they are often intertwined with mechanical knowledge; an effective pilot must not only be skilled at flying but also capability in understanding the aircraft's mechanics. This kind of training and understanding significantly contributes to mission success and safety in Army Aviation.

4. What type of questions are included in the Mechanical Comprehension section of the SIFT?

- A. Questions about mathematics and calculations**
- B. Questions regarding basic principles of mechanics and physical science**
- C. Questions about historical aviation events**
- D. Questions on aircraft navigation systems**

The Mechanical Comprehension section of the SIFT focuses on assessing a candidate's understanding of fundamental mechanical principles and the laws of physics as they apply to practical situations. This includes concepts such as force, motion, levers, pulleys, gears, and other simple machines. These questions aim to determine how well an individual can apply their knowledge of mechanics to real-world scenarios, which is crucial for roles in aviation where understanding how things work mechanically is essential for safe and effective operation of aircraft and equipment. Candidates are often required to interpret diagrams or predict the outcomes of mechanical systems, demonstrating their grasp of physical science principles. The other types of questions listed do not align with this focus: mathematics and calculations may appear in other sections but not specifically in Mechanical Comprehension, while historical aviation events and aircraft navigation systems pertain to aviation history and aeronautical knowledge, respectively, which are distinct from the principles of mechanics.

5. How does a pilot control the helicopter's nose to turn left or right?
- A. Pushing down on the collective for left motion and pulling up on it to turn right.
 - B. Tilting the main rotor disk left or right while keeping the pedals neutral.
 - C. Pushing on the left or right pedal while adjusting the cyclic to compensate for greater rotational drag.
 - D. Pushing on the corresponding pedal.**

The correct answer emphasizes the role of the pedals in controlling the helicopter's yaw, which is the term used to describe the left or right rotation of the helicopter's nose. When a pilot wants to turn the helicopter, they use the foot pedals which are connected to the tail rotor control system. Pressing one pedal causes the tail rotor to adjust its thrust, allowing the helicopter to rotate in the direction dictated by which pedal was pressed. When the left pedal is pressed, the tail rotor produces more thrust on the right side, thus turning the nose of the helicopter to the left. Conversely, pressing the right pedal increases thrust on the left side of the tail rotor, turning the helicopter's nose to the right. This method of control is crucial for coordinated turns, as it maintains balance and allows for smoother maneuvers while managing the helicopter's stability in flight. Other methods mentioned, such as using the collective or cyclic, do not directly manipulate the nose direction in the same way, as they primarily affect altitude and forward/backward pitch respectively.

6. How can understanding aerodynamics benefit SIFT candidates?
- A. It provides insight into flight routes
 - B. It enhances comprehension of flight principles tested in the Aviation Information section**
 - C. It simplifies the math calculations
 - D. It reduces study time needed for the exam

The correct choice emphasizes that understanding aerodynamics significantly enhances a candidate's comprehension of the fundamental principles of flight, which are critical components of the Aviation Information section of the SIFT exam. Aerodynamics is the study of how air interacts with moving objects, specifically how aircraft are designed and operated to travel efficiently through the atmosphere. Knowledge of aerodynamics helps candidates grasp essential concepts such as lift, drag, thrust, and weight, which are all pivotal in aviation. For SIFT candidates, a solid grasp of these principles will not only aid them in answering questions related to aircraft performance and operation correctly but also improve their overall understanding of how various forces affect flight. Mastering these concepts positions candidates to excel on the Aviation Information section, as many questions will require familiarity with these fundamental aerodynamic principles. A comprehensive understanding of aerodynamics does not directly simplify math calculations or reduce study time but rather provides context that enables candidates to logically approach problems they may encounter in the exam. This clarity enhances their ability to engage with complex flight concepts, leading to a deeper overall understanding essential for success in both the SIFT exam and future aviation responsibilities.

7. What can primary pitch control in a helicopter affect?

- A. The rotor disk's angle of attack**
- B. The tail rotor's thrust direction**
- C. The altitude impact of induced drag**
- D. The forward speed of the helicopter**

Primary pitch control in a helicopter significantly influences the rotor disk's angle of attack. When the pilot adjusts the pitch via the cyclic control, it alters the inclination of the rotor blades as they rotate around the rotor hub. This change in pitch directly impacts the angle at which the rotor blades meet the oncoming airflow, known as the angle of attack. An increased angle of attack enhances lift, allowing the helicopter to ascend or maintain altitude, while a reduced angle of attack can lead to descent. Understanding the effects of pitch control is crucial for helicopter operations, as it allows pilots to maneuver the aircraft effectively in various flight situations. The relationship between pitch control and the rotor disk's angle of attack is foundational for managing lift and understanding helicopter dynamics.

8. During a hovering turn, which of the following factors must remain consistent to ensure safety?

- A. Heading**
- B. Altitude**
- C. Ground speed**
- D. Visual cues**

In a hovering turn, maintaining a consistent altitude is critical for safety. During this maneuver, the helicopter must remain at a steady altitude to ensure that the pilot has control over the aircraft and that it does not inadvertently descend or ascend, which could lead to loss of control or an accident. A stable altitude helps the pilot manage the helicopter's performance characteristics effectively, allowing for adjustments due to wind or other external factors while ensuring that the aircraft remains in a safe operational zone. While other factors like heading and visual cues are important for situational awareness and navigation, fluctuations in these can be managed during a hovering turn. Ground speed is not typically relevant in a hovering context, as the helicopter is not moving horizontally, making it less critical during this specific maneuver. However, altitude directly affects the safety of the helicopter's flight and operational integrity, making it paramount to keep it consistent throughout the turn.

9. What is an effective way to prepare for the Reading Comprehension section of the SIFT?

- A. Memorizing vocabulary words**
- B. Practicing reading various texts and summarizing main ideas**
- C. Studying previous SIFT exams**
- D. Focusing exclusively on technical manuals**

Practicing reading various texts and summarizing main ideas is an effective approach for preparing for the Reading Comprehension section of the SIFT. This method helps develop essential skills such as identifying key concepts, understanding the structure of arguments, and interpreting information across different types of texts. By engaging with a variety of reading materials, candidates learn to adapt their comprehension strategies, enhance their reading speed, and improve their ability to distill complex information into succinct summaries, which are crucial skills for this section of the exam. Additionally, summarizing allows candidates to actively engage with the material, reinforcing their understanding and retention of main ideas and supporting details, ultimately leading to better performance during the actual test. This comprehensive practice reflects the types of tasks that will be faced in the Reading Comprehension section, making it a highly relevant and beneficial preparation strategy.

10. If the helicopter's nose drops while flying and the cyclic is neutral, what is likely causing this?

- A. Trim is improperly set**
- B. The helicopter is too heavy**
- C. Fuel in the rear is being used up**
- D. Airspeed is too low**

The situation described involves the helicopter's nose dropping while the cyclic control is neutral. This indicates that there may be an imbalance in the helicopter's center of gravity or load distribution. When fuel is burned from the rear tanks, the helicopter's center of gravity shifts forward. If the cyclic is not adjusted to maintain proper pitch attitude, this can result in the nose of the helicopter dropping. As fuel is consumed from the rear, it decreases the overall weight at that end, leading to a shift that can cause the nose to lower unless corrective action is taken through the cyclic. This phenomenon underscores the importance of managing fuel loads and being aware of how changes in fuel can affect the helicopter's balance and performance. Other factors like improper trim settings, excess weight, or low airspeed might influence flying characteristics, but in this scenario, the specific action of burning fuel from the rear clearly illustrates a direct cause for the nose dropping.