# T-6A Operating Limits Practice Test (Sample)

## Study Guide


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# Questions

**1. What is the maximum landing weight for the T-6A?**

**A. 5,500 pounds**

**B. 6,000 pounds**

**C. 6,600 pounds**

**D. 7,000 pounds**

**2. What is the minimum fuel quantity for takeoff in the T-6A?**

**A. 50 pounds per wing**

**B. 75 pounds per wing**

**C. 100 pounds per wing**

**D. 125 pounds per wing**

**3. What is the standard Vmcg for the T-6A?**

**A. 75 KIAS**

**B. 80 KIAS**

**C. 85 KIAS**

**D. 90 KIAS**

**4. What is the maximum crosswind component allowable on a dry runway for the T-6A?**

**A. 30 Knots**

**B. 25 Knots**

**C. 20 Knots**

**D. 15 Knots**

**5. What is the normal operating temperature range for the T-6A engine?**

**A. 150 to 200 degrees Celsius**

**B. 200 to 250 degrees Celsius**

**C. 250 to 300 degrees Celsius**

**D. 300 to 350 degrees Celsius**

**6. What is the circuit breaker reset limit for the T-6A?**

**A. 0 cycles**

**B. 1 cycle**

**C. 2 cycles**

**D. 3 cycles**

**7. What is the roll rate of the T-6A at maximum speed?**

- **A. 70 degrees per second**
- **B. 90 degrees per second**
- **C. 110 degrees per second**
- **D. 130 degrees per second**

**8. What is the typical climb rate for the T-6A?**

- **A. 1,000 feet per minute**
- **B. 1,500 feet per minute**
- **C. 2,000 feet per minute**
- **D. 2,500 feet per minute**

**9. What is the maximum tolerance for towing speed for the T-6A?**

- **A. 2 knots**
- **B. 5 knots**
- **C. 8 knots**
- **D. 12 knots**

**10. What is the maximum bank angle recommended for the T-6A?**

- **A. 60 degrees**
- **B. 70 degrees**
- **C. 80 degrees**
- **D. 90 degrees**

# Answers

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

# Explanations

## 1. What is the maximum landing weight for the T-6A?

**A. 5,500 pounds**

**B. 6,000 pounds**

**C. 6,600 pounds**

**D. 7,000 pounds**

**The maximum landing weight for the T-6A is 6,600 pounds. This limit is established to ensure safe landing operations by taking into account factors such as structural integrity, landing gear capabilities, and overall aircraft performance during landing. Exceeding this weight could compromise the aircraft's ability to land safely and effectively, potentially leading to damaging the airframe or risking the safety of the crew and aircraft. The 6,600-pound figure is set as a critical operational limit, and adhering to it is essential for maintaining safe flight operations and ensuring the longevity of the aircraft's components during landing maneuvers.**

## 2. What is the minimum fuel quantity for takeoff in the T-6A?

**A. 50 pounds per wing**

**B. 75 pounds per wing**

**C. 100 pounds per wing**

**D. 125 pounds per wing**

**In the T-6A, the minimum fuel quantity required for takeoff is 100 pounds per wing. This requirement ensures that there is enough fuel to enable safe flight operations, maintaining an adequate fuel reserve for potential emergencies and fuel consumption during the initial stages of flight. Having 100 pounds per wing provides a safety margin that accounts for fuel burn during taxi, takeoff, and initial climb, along with ensuring that there is enough fuel in case of any unplanned contingencies. This fuel quantity is established based on operating limits which are crucial for flight safety and performance. The options below the correct value would not meet the operational requirements set forth for takeoff, thereby making 100 pounds per wing the safe and necessary minimum for ensuring both compliance with regulations and the safe operation of the aircraft.**

## 3. What is the standard Vmcg for the T-6A?

**A. 75 KIAS**

**B. 80 KIAS**

**C. 85 KIAS**

**D. 90 KIAS**

**The standard Vmcg (minimum control speed on the ground) for the T-6A is 85 KIAS. This speed is critical for ensuring that the aircraft can be controlled in the event of an engine failure while taking off. At speeds below Vmcg, the aircraft may not have sufficient airflow over the control surfaces and might lose directional control, particularly if an engine failure occurs. Understanding Vmcg is essential for pilots as it directly impacts takeoff performance. Operating at or above this speed during the takeoff roll is crucial for maintaining control of the aircraft. If an engine fails before reaching this speed, the pilot would have less control authority and may not be able to keep the aircraft aligned with the runway, potentially leading to a loss of control and subsequent accidents. This knowledge is vital for safe flight operations and underscores the importance of pre-takeoff checks and understanding aircraft limitations, ensuring that pilots are fully aware of their performance parameters for normal and emergency situations during takeoff.**

## 4. What is the maximum crosswind component allowable on a dry runway for the T-6A?

**A. 30 Knots**

**B. 25 Knots**

**C. 20 Knots**

**D. 15 Knots**

**The maximum allowable crosswind component on a dry runway for the T-6A is 25 knots. This limit is critical for ensuring safe operation during landing and takeoff, as exceeding it can significantly increase the risk of losing control of the aircraft in crosswind conditions. This limit is established based on extensive testing and operational experience, which take into account the aircraft's handling characteristics and stability under challenging wind conditions. Therefore, recognizing and adhering to this crosswind limit is essential for student pilots and operators of the T-6A to maintain safety during flight operations. Understanding this limit helps ensure that pilots are prepared to manage crosswind situations effectively and make informed decisions about when it is safe to land or take off given the prevailing weather conditions.**

## 5. What is the normal operating temperature range for the T-6A engine?

**A. 150 to 200 degrees Celsius**

**B. 200 to 250 degrees Celsius**

**C. 250 to 300 degrees Celsius**

**D. 300 to 350 degrees Celsius**

**The normal operating temperature range for the T-6A engine is indeed between 200 to 250 degrees Celsius. This range is critical for ensuring the engine operates efficiently and safely under normal conditions. Within this range, the engine can provide optimal performance, balance fuel efficiency, and reduce the risk of overheating or mechanical failure. Operating outside this temperature range can lead to various issues; for instance, temperatures below 200 degrees Celsius may result in incomplete combustion, which can affect engine performance and fuel efficiency. Conversely, exceeding 250 degrees Celsius can put excessive stress on engine components, leading to premature wear or possibly engine failure. Maintaining the normal operating temperature range is essential for the longevity and reliability of the T-6A engine.**

## 6. What is the circuit breaker reset limit for the T-6A?

**A. 0 cycles**

**B. 1 cycle**

**C. 2 cycles**

**D. 3 cycles**

**In the context of the T-6A, the circuit breaker reset limit is critical for maintaining the integrity of the aircraft's electrical systems. Resetting a circuit breaker that has tripped is allowed only once; therefore, a limit of one cycle is established to prevent potential damage to the aircraft systems and ensure safety. This policy helps to ensure that the underlying issue causing the trip is properly addressed before attempting to restore power, which is essential for both operational reliability and safety. Exceeding this limit could result in unaddressed faults leading to further malfunctions, which is why the one-cycle reset limit is strictly adhered to in T-6A operations.**

## 7. What is the roll rate of the T-6A at maximum speed?

**A. 70 degrees per second**

**B. 90 degrees per second**

**C. 110 degrees per second**

**D. 130 degrees per second**

**The roll rate of the T-6A at maximum speed is 90 degrees per second. This specification is significant for pilots as it outlines the aircraft's maneuverability at high speeds, which is an important factor in various flight operations. Understanding the roll rate is crucial for executing turns and maintaining control during high-speed maneuvers. At maximum speed, the T-6A is designed to maintain a roll rate that is efficient for engaging in aerobatics and tactical maneuvers while ensuring the aircraft remains within its operating limits. This performance measure helps pilots manage the aircraft effectively during training missions and while simulating combat situations, thereby enhancing their situational awareness and ability to respond to dynamic flying conditions. The specified roll rate reflects the aircraft's capabilities and limitations, underscoring the importance of adhering to the manufacturer's guidelines for safe operation.**

## 8. What is the typical climb rate for the T-6A?

**A. 1,000 feet per minute**

**B. 1,500 feet per minute**

**C. 2,000 feet per minute**

**D. 2,500 feet per minute**

**The typical climb rate for the T-6A is approximately 1,500 feet per minute under standard conditions. This rate is a crucial performance metric for the aircraft, reflecting its ability to gain altitude efficiently during ascent. Operating at this climb rate allows the T-6A to maintain a balance between power management and airspeed, which is essential for handling various flight profiles and demands. Factors such as weight, altitude, and atmospheric conditions can affect the actual climb rate, but 1,500 feet per minute serves as a solid reference point for performance expectations during training and operational flights. This understanding of climb performance is essential for pilots as they plan and execute flight maneuvers, ensuring safety and efficiency throughout the climb phase.**

## 9. What is the maximum tolerance for towing speed for the T-6A?

**A. 2 knots**

**B. 5 knots**

**C. 8 knots**

**D. 12 knots**

**The maximum tolerance for towing speed for the T-6A is set at 5 knots. This limit is established to ensure safe handling of the aircraft during tow operations, preventing potential damage or control issues that could arise at higher speeds. Maintaining a towing speed within this specified limit is essential for the structural integrity of the aircraft as well as the safety of personnel involved in towing operations. Exceeding this speed could introduce risks, such as increased hydraulic pressure effects or stress on the aircraft's components, leading to possible mechanical failure or an unsafe towing situation. The limits are designed to protect both the aircraft and those involved in its operation, emphasizing the importance of adhering strictly to these operational guidelines.**

## 10. What is the maximum bank angle recommended for the T-6A?

**A. 60 degrees**

**B. 70 degrees**

**C. 80 degrees**

**D. 90 degrees**

**The maximum bank angle recommended for the T-6A is 70 degrees. This limit is established to ensure optimal aircraft performance and safety during maneuvers. Exceeding this bank angle can lead to excessive load factors on the airframe, which increases the risk of loss of control or structural damage. In training and operational contexts, maintaining the recommended bank angle is essential for managing the aircraft's behavior during turns and preventing problems associated with high angles of bank, such as increased stall risk and reduced control effectiveness. Staying within this limit helps pilots maintain a safe margin, making it easier to handle the aircraft in various conditions and maximizing the effectiveness of training exercises and missions. This level is part of the operational limits set forth to ensure that pilots can safely engage in aerial maneuvers while preserving the integrity and reliability of the aircraft.**