

T-6B Primary Flight Training - Contact Stage 2 Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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SAMPLE

Questions

- 1. What aspect of flight training is highlighted by takeaway errors in landing?**
 - A. Pilot's decision-making skills and aircraft control**
 - B. Engine performance during landing approach**
 - C. Weather prediction and adjustment**
 - D. Flap effectiveness in descending**
- 2. What is the correct configuration of the aircraft at the initial point after determining the duty runway at an OLF?**
 - A. On extended runway centerline with gear down**
 - B. Heading towards the runway at break altitude**
 - C. On extended runway centerline, on runway heading, wings level**
 - D. With a descent rate established at gear down**
- 3. Which of the following best describes the concept of Threat and Error Management (TEM)?**
 - A. A focus on technological advancements**
 - B. A framework for addressing safety threats and errors**
 - C. A method for aircraft maintenance**
 - D. A standard for pilot training**
- 4. When should the landing gear be lowered after reaching dead engine glide altitude (DEGA)?**
 - A. Immediately after reaching high key**
 - B. No later than high key**
 - C. After stabilizing descent**
 - D. Just before touchdown**
- 5. If an airplane is in a dive at 200 KIAS and the pilot pulls back sharply on the elevator control exceeding 5Gs, what could this lead to?**
 - A. Stall recovery**
 - B. Accelerated stall**
 - C. Normal flight recovery**
 - D. Controlled descent**

- 6. Which of the following is NOT a method used to dissipate energy during the glide to high key position?**
- A. S-turns**
 - B. Clearing turns**
 - C. Slips**
 - D. Bow ties**
- 7. Which of the following procedures does NOT apply to touch and go landings?**
- A. Reduce power to ~42% at 100 feet prior to pattern altitude**
 - B. Transition to level flight before reaching pattern altitude**
 - C. Confirm positive rate of climb before raising flaps**
 - D. Retract flaps and gear once below 120 KIAS**
- 8. What is the approximate distance the aircraft will travel over the ground during a level deceleration when unable to climb or zoom to intercept the ELP?**
- A. 0.1 to 0.2 nautical miles for every 10 knots above 125 KIAS**
 - B. 0.5 to 1 nautical miles for every 20 knots above 125 KIAS**
 - C. 0.2 to 0.3 nautical miles for every 10 knots above 125 KIAS**
 - D. 1 to 2 nautical miles for every 30 knots above 125 KIAS**
- 9. What is the cause of a ballooning landing error?**
- A. Rapid flare with excessive airspeed**
 - B. Low altitude at touchdown**
 - C. Delayed landing gear deployment**
 - D. Excessive downward pitch during approach**
- 10. What effect does a high flare landing error typically have on an aircraft?**
- A. Improved landing speed**
 - B. Inability to flare normally due to excess altitude**
 - C. Reduced landing distance**
 - D. Increased gear stress**

Answers

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

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Explanations

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1. What aspect of flight training is highlighted by takeaway errors in landing?

A. Pilot's decision-making skills and aircraft control

B. Engine performance during landing approach

C. Weather prediction and adjustment

D. Flap effectiveness in descending

The correct answer emphasizes the importance of a pilot's decision-making skills and aircraft control during the landing phase of flight training. Takeaway errors in landing typically relate to how a pilot assesses and responds to various situations, such as approaching the runway at the correct speed and angle, managing descent rates, and executing the proper landing procedure. Improper decision-making can lead to misjudging distances, heights, or energy management, which are vital for a safe landing. Likewise, aircraft control plays a significant role; pilots must manipulate the controls with precision to maintain stability and alignment with the runway. Therefore, recognizing and analyzing takeaway errors provides valuable insights into the pilot's ability to make sound decisions and control the aircraft effectively in critical moments. Understanding these aspects during training not only enhances skill sets but also is crucial for real-world flying scenarios. The focus on decision-making and control highlights the foundational skills necessary for safe navigation and landing, reinforcing the core principles of flight training that all pilots must master.

2. What is the correct configuration of the aircraft at the initial point after determining the duty runway at an OLF?

A. On extended runway centerline with gear down

B. Heading towards the runway at break altitude

C. On extended runway centerline, on runway heading, wings level

D. With a descent rate established at gear down

The correct answer highlights the importance of being properly aligned with the runway to ensure a safe and efficient landing approach. The configuration of being on the extended runway centerline, on runway heading, and with wings level indicates that the aircraft is appropriately set up for the landing phase of flight. This alignment is crucial as it allows for a stable approach, reducing the risk of drift or unintentional turns that could lead to difficulties during the landing. In this configuration, the pilot can more effectively manage descent rates and speed, ensuring that everything aligns for a successful landing. It also supports situational awareness as the pilot can clearly see the approach path and prepare for any adjustments needed as the landing progresses. Understanding this setup is vital for flight training as it reinforces proper landing procedures and aircraft handling skills critical for student pilots.

3. Which of the following best describes the concept of Threat and Error Management (TEM)?

- A. A focus on technological advancements**
- B. A framework for addressing safety threats and errors**
- C. A method for aircraft maintenance**
- D. A standard for pilot training**

The concept of Threat and Error Management (TEM) is primarily a framework for addressing safety threats and errors that may arise during flight operations. It emphasizes the identification and management of both external threats and internal errors to enhance safety in aviation. By focusing on recognizing potential threats—such as adverse weather conditions or system malfunctions—and the errors that might occur as a result, pilots can take proactive measures to mitigate risks. TEM helps create a safety culture in aviation by encouraging a systematic approach to analyzing flight situations. It involves training pilots to anticipate challenges, make informed decisions, and respond effectively, thereby improving overall operational safety. This proactive management is essential for maintaining safety in the complex and dynamic environment of aviation. Other choices do not accurately represent the core principles of TEM. For instance, focusing solely on technological advancements doesn't capture the essence of threat and error management, which concerns human factors and operational decision-making. Similarly, a method for aircraft maintenance and a standard for pilot training do not encapsulate the comprehensive approach that TEM embodies in addressing both threats and errors in real-time flight contexts.

4. When should the landing gear be lowered after reaching dead engine glide altitude (DEGA)?

- A. Immediately after reaching high key**
- B. No later than high key**
- C. After stabilizing descent**
- D. Just before touchdown**

Lowering the landing gear no later than high key is the correct practice because it allows for the necessary time to ensure the gear is down and locked prior to the critical phases of landing. High key represents a point in the pattern where the aircraft is at an altitude typically above the traffic pattern altitude, providing a good opportunity to configure the aircraft for landing without rushing the process. By lowering the landing gear at or before high key, the pilot ensures that all systems related to gear operation can be checked, and any potential issues can be addressed without compromising safety. This timing also aids in the stabilization of the aircraft's descent profile, allowing for a smoother transition from the high key to the low key and ultimately to the landing phase. Other options may suggest lowering the gear at different times that could lead to insufficient time for checks, raising the risk of complications during the landing sequence. Thus, timely lowering of the landing gear is essential for ensuring safe and effective landing procedures when managing an engine-out scenario.

5. If an airplane is in a dive at 200 KIAS and the pilot pulls back sharply on the elevator control exceeding 5Gs, what could this lead to?

A. Stall recovery

B. Accelerated stall

C. Normal flight recovery

D. Controlled descent

When a pilot pulls back sharply on the control yoke while in a dive, especially at high speeds such as 200 knots indicated airspeed (KIAS), they can induce a rapid increase in the angle of attack. If this maneuver exceeds 5Gs, the aircraft can enter an accelerated stall. An accelerated stall occurs because the lift generated by the wings is a function of both airspeed and the angle of attack. When the angle of attack increases dramatically, particularly in a high-speed scenario, it surpasses the critical angle of attack, leading to a stall. In this case, the extra aerodynamic load (due to the high G forces) exacerbates the stall conditions, making the aircraft more susceptible to losing lift. Understanding this concept is crucial for pilots, as recovering from an accelerated stall requires specific inputs and awareness. If the pilot does not manage the pull aggressively or misjudges the situation, the plane might not only stall but could also lead to a more complex recovery scenario. Other options like stall recovery, normal flight recovery, or controlled descent do not apply in this scenario because they indicate outcomes that would not result from exceeding the G limits in a dive. accelerated stalling is specifically associated with high-speed maneuvers exacerbated

6. Which of the following is NOT a method used to dissipate energy during the glide to high key position?

A. S-turns

B. Clearing turns

C. Slips

D. Bow ties

In the context of energy management during a glide to high key position, clearing turns serve a different purpose than dissipating energy. Clearing turns are primarily executed to ensure that the airspace is clear of other aircraft or obstacles before performing maneuvers or entering a specific area. While they are crucial for safety and situational awareness, they do not contribute to reducing altitude or energy; instead, they may temporarily add to energy if the turns are wide or steep. On the other hand, S-turns, slips, and bow ties are all effective techniques for dissipating altitude and energy. S-turns involve a series of turns while maintaining a constant altitude, which helps to descend efficiently while effectively managing the energy state of the aircraft. Slips are used to increase drag, allowing for a more controlled descent. Bow ties, although less common, also involve maneuvering in a pattern that allows for descent while managing the aircraft's energy. Thus, clearing turns do not serve as a method for energy dissipation in the glide down to the high key position.

7. Which of the following procedures does NOT apply to touch and go landings?

- A. Reduce power to ~42% at 100 feet prior to pattern altitude**
- B. Transition to level flight before reaching pattern altitude**
- C. Confirm positive rate of climb before raising flaps**
- D. Retract flaps and gear once below 120 KIAS**

The correct answer highlights a procedure that is not typically part of touch and go landings. During a touch and go, the focus is on performing a landing followed immediately by a takeoff without coming to a full stop. In standard operating procedures for touch and go landings, transitioning to level flight before reaching pattern altitude is important because it allows the pilot to stabilize the aircraft in a controlled condition, ensuring safe arrival at the desired altitude. Confirming a positive rate of climb before retracting flaps is crucial as it ensures that the aircraft has sufficient lift and is climbing effectively before changing configuration to enhance performance. Additionally, retracting flaps and gear below 120 KIAS aligns with aircraft performance norms to prevent potential complications from excessive drag or unintentional stall conditions. However, reducing power to approximately 42% at 100 feet before reaching pattern altitude is not a typical procedure for touch and go landings. Power management during the final approach phase is usually based on maintaining a safe airspeed and approach path, not a predetermined power setting at 100 feet. Therefore, this option does not apply to standard practices associated with touch and goes.

8. What is the approximate distance the aircraft will travel over the ground during a level deceleration when unable to climb or zoom to intercept the ELP?

- A. 0.1 to 0.2 nautical miles for every 10 knots above 125 KIAS**
- B. 0.5 to 1 nautical miles for every 20 knots above 125 KIAS**
- C. 0.2 to 0.3 nautical miles for every 10 knots above 125 KIAS**
- D. 1 to 2 nautical miles for every 30 knots above 125 KIAS**

The correct choice provides a specific range of ground distance that the aircraft is expected to travel during a level deceleration when it cannot climb or zoom to intercept the Emergency Landing Procedures (ELP). This concept is crucial for pilots to understand, as it helps in planning for emergencies when the aircraft might need to be brought down safely and efficiently. When flying at higher speeds, especially above 125 KIAS (Knots Indicated Airspeed), the aircraft's ground distance during a deceleration can increase because of the relation between speed and the aerodynamic forces acting on the aircraft. The range of 0.1 to 0.2 nautical miles for every 10 knots above 125 KIAS reflects this relationship. Understanding this allows pilots to calculate and anticipate the approximate distance they will cover if they need to execute a controlled deceleration at various speeds. The implications of this distance become very important in emergency scenarios where the decision to land must be made swiftly, and knowing the distance helps in selecting an appropriate landing area or planning the approach path. This information is critical for situational awareness and ensures that pilots can make informed decisions under stressful conditions.

9. What is the cause of a ballooning landing error?

- A. Rapid flare with excessive airspeed**
- B. Low altitude at touchdown
- C. Delayed landing gear deployment
- D. Excessive downward pitch during approach

The cause of a ballooning landing error is primarily related to a rapid flare executed with excessive airspeed. During the landing phase, pilots must transition smoothly from the approach to the flare, where the aircraft is lifted off the ground to reduce its descent rate just before touchdown. If this flare is performed too abruptly while the aircraft still has substantial forward speed, it can result in an unintended increase in altitude and a subsequent delay in touchdown. This ballooning effect can lead the aircraft to float or ascend temporarily, which could ultimately disrupt the intended landing sequence and lead to a go-around or extended landing approach. Recognizing the importance of managing airspeed throughout the landing sequence, particularly during the flare, is crucial for pilots to avoid this common error. Proper technique in timing and the application of control inputs helps ensure a smooth and controlled landing.

10. What effect does a high flare landing error typically have on an aircraft?

- A. Improved landing speed
- B. Inability to flare normally due to excess altitude**
- C. Reduced landing distance
- D. Increased gear stress

A high flare landing error typically results in the aircraft being at an excessive altitude when attempting to flare for landing. This can compromise the pilot's ability to effectively control the descent rate and touchdown attitude of the aircraft. When the airplane is too high during the flare, it may lead to a prolonged floating effect above the runway, making it challenging to settle it down properly for a safe landing. The pilot may either run out of runway or have to perform a more aggressive descent to land, which can lead to a hard landing or a missed approach. In contrast, other options do not align with the consequences of a high flare error. For instance, improved landing speed is not a factor of high flares since the aircraft's speed management is compromised in this scenario. A reduced landing distance is also misleading, as the extended altitude typically requires a longer distance for the aircraft to descend and align properly for touchdown. Finally, while gear stress could potentially be a consideration in a hard landing scenario, it is not a direct consequence of simply having excess altitude during the flare. Therefore, the primary and most crucial effect of a high flare landing error is the inability to flare normally due to the aircraft being at an unsafe height above the runway.