Primary Contact 2 Practice Test (Sample)

Study Guide

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Questions

1. **What is a good memory aid for the steps in the PEL checklist?**

   A. "Transition, Climb, Clean, Check, BIP"

   B. "Turn, Climb, Clean, Check, BIP"

   C. "Turn, Climb, Clean, Call, BIP"

   D. "Transition, Climb, Clean, Call, BIP"

2. **Which statement is a correct causal factor for a ballooning landing error?**

   A. Late power reduction and improper flap settings

   B. Rapidly raising the nose with excessive airspeed

   C. Incorrect landing attitude and speed

   D. Improper pitch control during flare

3. **During a no flap landing, at what speed should final approach be intercepted, and how far from the threshold?**

   A. 110 KIAS; 1000-1200 feet

   B. 110 KIAS; 1200-1500 feet

   C. 120 KIAS; 1000-1200 feet

   D. 120 KIAS; 1200-1500 feet

4. **The break procedure involves transitioning the aircraft from which configuration to the arrival configuration?**

   A. Fast cruise configuration

   B. Normal cruise configuration

   C. Slow cruise configuration

   D. Landing configuration

5. **What is the maximum glide distance to high key position from 8,000 feet MSL at a sea level airfield?**

   A. 8 nautical miles

   B. 10 nautical miles

   C. 13 nautical miles

   D. 16 nautical miles

6. Which situation indicates a mandatory waveoff?

A. Landing gear is down

B. All of the above

C. Standard visual reference lost

D. Inspecting landing gear status

7. What is the visual wing reference for 2/3 wingtip distance?

A. Fuel cap

B. Where the orange meets the white on the wing leading edge

C. Where the canopy rail visually bisects the wing

D. Wingtip bisecting the intended point of landing

8. For a no flap landing pattern, what airspeed and altitude should be targeted at the 90 position?

A. 110 KIAS, 450 MSL or 1/2 pattern altitude

B. 120 KIAS, 450 MSL or 1/2 pattern altitude

C. 110 KIAS, 450 AGL or 1/2 pattern altitude

D. 120 KIAS, 450 AGL or 1/2 pattern altitude

9. What is the target altitude and airspeed at Base Key within the ELP?

A. 400-600 feet AGL at 110 KIAS minimum

B. 400-600 feet MSL at 120 KIAS minimum

C. 600-800 feet AGL at 120 KIAS minimum

D. 600-800 feet MSL at 110 KIAS minimum

10. Which of the following is NOT a factor in TEM?

A. Human performance

B. Crew resource management

C. Aircraft fuel efficiency

D. Environmental conditions

Answers

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

Explanations

1. What is a good memory aid for the steps in the PEL checklist?

A. "Transition, Climb, Clean, Check, BIP"

B. "Turn, Climb, Clean, Check, BIP"

C. "Turn, Climb, Clean, Call, BIP"

D. "Transition, Climb, Clean, Call, BIP"

The choice of "Turn, Climb, Clean, Check, BIP" serves as an effective memory aid for the steps in the PEL checklist because it encapsulates the essential actions pilots must remember when executing the PEL (Power on Engine Loss) procedure. In aviation, the PEL checklist is vital for maintaining control and safety during an engine-out emergency. The initial command, "Turn," is crucial as it directs the pilot to change the aircraft's heading towards a suitable landing area, establishing the foundation of the response strategy. Following this, "Climb" emphasizes the importance of gaining altitude whenever possible, which can help the aircraft achieve better glide performance. The subsequent step, "Clean," involves optimizing the aircraft configuration for glide, typically meaning retracting the landing gear and flaps to reduce drag. "Check" serves as a reminder for the pilot to verify their surroundings, the status of the aircraft, and communicate or prepare for the landing as appropriate. Finally, "BIP" refers to the "Best Indicated Airspeed," helping the pilot ensure the airplane is maintained at the most efficient speed to maximize glide distance and control. This mnemonic captures the critical actions and sequencing needed in a PEL situation, making it a valuable tool

2. Which statement is a correct causal factor for a ballooning landing error?

A. Late power reduction and improper flap settings

B. Rapidly raising the nose with excessive airspeed

C. Incorrect landing attitude and speed

D. Improper pitch control during flare

A correct causal factor for a ballooning landing error is the rapid raising of the nose with excessive airspeed. During the landing process, if the pilot inadvertently pulls up the nose too quickly while still having a higher-than-optimal airspeed for landing, this can lead to the ballooning effect. The aircraft will gain altitude instead of descending toward the runway, which is a common mistake. The excessive airspeed combined with aggressive pitch control can cause the aircraft to become unstable and may prevent a proper touchdown. This phenomenon often occurs in scenarios where the pilot is overly cautious about coming in too low or is attempting to maintain altitude near the ground, resulting in an improper flare. Acknowledging the balance between the appropriate airspeed and the correct pitch attitude is essential to achieving a successful landing without ballooning.

3. During a no flap landing, at what speed should final approach be intercepted, and how far from the threshold?

A. 110 KIAS; 1000-1200 feet

B. 110 KIAS; 1200-1500 feet

C. 120 KIAS; 1000-1200 feet

D. 120 KIAS; 1200-1500 feet

Final approach speed during a no-flap landing is critical for ensuring a safe and stable descent towards the runway. The correct choice indicates that the final approach should be intercepted at a speed of 110 knots indicated airspeed (KIAS) when the aircraft is 1200 to 1500 feet from the runway threshold. This speed is typically chosen because it allows for effective control of the aircraft while managing the descent rate, ensuring that the airplane remains within a safe operational envelope. This is especially important in a no-flap landing, as the lack of wing flaps reduces lift and requires a more precise approach speed to prevent stalling and ensure adequate control. Furthermore, intercepting the final approach at a distance of 1200 to 1500 feet gives the pilot sufficient time to configure the aircraft and make necessary adjustments before landing. This distance allows for effective situational awareness and helps in maintaining the desired glide path toward the runway. It also accounts for establishing a stabilized approach, providing time to correct any deviations from the intended flight path. Overall, this speed and distance are part of a well-documented procedure for no-flap landings that prioritize safety and control during an essential phase of flight.

4. The break procedure involves transitioning the aircraft from which configuration to the arrival configuration?

A. Fast cruise configuration

B. Normal cruise configuration

C. Slow cruise configuration

D. Landing configuration

The break procedure is a critical maneuver used in aviation to prepare for landing. During this procedure, the aircraft transitions from a fast cruise configuration to an arrival configuration, which is typically characterized by a slower speed and specific configurations that help facilitate a safe landing approach. The fast cruise configuration allows the aircraft to operate efficiently at higher speeds during the cruise phase of flight, but as the aircraft begins the break procedure, it must reduce speed and adjust its configuration to ensure that it can safely approach and land on the runway. This transition to the arrival configuration is essential for establishing an appropriate approach path and for ensuring that the aircraft is ready to execute any necessary maneuvers as it descends toward the landing phase. Other configurations like the normal cruise, slow cruise, or landing configuration are not the starting point for the break procedure; instead, they represent different phases or stages of flight that follow or differ from the initial fast cruise state as the aircraft prepares for a landing approach. Thus, the correct answer reflects the true initial state before beginning the break, which is the fast cruise configuration.

5. What is the maximum glide distance to high key position from 8,000 feet MSL at a sea level airfield?

A. 8 nautical miles

B. 10 nautical miles

C. 13 nautical miles

D. 16 nautical miles

The maximum glide distance to the high key position is determined by factors such as the altitude of the aircraft, the specific glide ratio of the aircraft, and the general rule used in aviation to calculate glide distances. At 8,000 feet MSL, gliders or aircraft typically achieve a glide ratio that allows them to glide a distance that is a multiple of their altitude — often around 10:1 for performance aircraft. This means that for every 1,000 feet of altitude, an aircraft can glide approximately 10 nautical miles horizontally under optimal conditions, which in this case would translate to around 8 nautical miles at 8,000 feet. However, the higher elevations in the engine-out scenario could allow for extended glide distances depending on specific aerodynamic designs and wind conditions. In this scenario, other options present distances that exceed what would be realistically achievable based on the typical glide ratio from that altitude to the high key position at a sea level airfield. Therefore, the choice of 10 nautical miles as the maximum glide distance reflects a practical and sensible estimation of the aerodynamic capabilities while aligning with standard floating estimates for the situation presented.

6. Which situation indicates a mandatory waveoff?

A. Landing gear is down

B. All of the above

C. Standard visual reference lost

D. Inspecting landing gear status

The situation that indicates a mandatory waveoff is when standard visual reference is lost. In the context of aviation, maintaining a clear visual reference during landing is critical for safety. If a pilot is unable to see the runway or any relevant landmarks due to adverse weather conditions, obstacles, or other factors, it becomes essential to initiate a waveoff to prevent a potentially dangerous situation. The presence of the landing gear being down does not, by itself, necessitate a waveoff. Similarly, inspecting the landing gear status is part of standard procedure but does not directly correlate with the need for a waveoff. Therefore, the best choice encompasses the scenario that clearly signals the necessity for a waveoff due to a lack of adequate visual references, ensuring that safety is prioritized during the landing approach.

7. What is the visual wing reference for 2/3 wingtip distance?

A. Fuel cap

B. Where the orange meets the white on the wing leading edge

C. Where the canopy rail visually bisects the wing

D. Wingtip bisecting the intended point of landing

The visual wing reference for 2/3 wingtip distance is commonly recognized as where the canopy rail visually bisects the wing. This reference is crucial for pilots to maintain proper alignment with the intended flight path or landing area. By using the canopy rail as a visual indicator, it allows for better spatial awareness and enhances judgment of distance and altitude during critical phases of flight, such as approach and landing. The other options do not provide the appropriate reference needed for maintaining this specific distance. For instance, the fuel cap may not visually correspond to any specific position relative to the wingtip, and the point where the orange and white meet or the wingtip bisecting the intended landing point are not standard markers for gauging 2/3 wingtip distance. By focusing on the canopy rail, pilots can achieve better stability and accuracy during maneuvers requiring precise control.

8. For a no flap landing pattern, what airspeed and altitude should be targeted at the 90 position?

A. 110 KIAS, 450 MSL or 1/2 pattern altitude

B. 120 KIAS, 450 MSL or 1/2 pattern altitude

C. 110 KIAS, 450 AGL or 1/2 pattern altitude

D. 120 KIAS, 450 AGL or 1/2 pattern altitude

The recommended airspeed and altitude at the 90 position in a no flap landing pattern is important for ensuring a safe and controlled approach. Targeting 120 KIAS helps to maintain better aircraft control and provides a buffer against potential stall margins, which is particularly crucial during the critical phases of landing without flaps. Setting an altitude of 450 AGL (Above Ground Level) ensures that the aircraft is at a safe height for the approach, allowing for adequate time to configure for landing and execute any necessary adjustments to the flight path. The choice of altitude being referenced as "1/2 pattern altitude" reinforces the principle of managing your vertical profile appropriately throughout the landing configuration. Overall, the combination of a slightly higher airspeed and the appropriate altitude aids in ensuring that, even without flaps, the aircraft remains responsive and stable for a safe landing approach.

9. What is the target altitude and airspeed at Base Key within the ELP?

A. 400-600 feet AGL at 110 KIAS minimum

B. 400-600 feet MSL at 120 KIAS minimum

C. 600-800 feet AGL at 120 KIAS minimum

D. 600-800 feet MSL at 110 KIAS minimum

The target altitude and airspeed at Base Key within the Engine-out Landing Pattern (ELP) are set to ensure a safe and effective approach for landing. The correct choice indicates an altitude of 600-800 feet Above Ground Level (AGL) and a minimum airspeed of 120 Knots Indicated Air Speed (KIAS). This altitude range is critical because it allows the aircraft to have sufficient height to maneuver and configure for landing, while also providing clearance above obstacles that may exist on the approach path. The airspeed of 120 KIAS is important for maintaining control of the aircraft during the landing phase, ensuring that the pilot has enough lift and control authority to execute the approach successfully. The choice of 600-800 feet AGL is particularly relevant as it keeps the aircraft at a safe distance above the runway and provides a buffer for any adjustments that might be needed as the pilot transitions from the ELP to the landing phase. Additionally, maintaining a higher minimum airspeed at this stage supports better responsiveness and stability in the aircraft's handling, which is essential during these critical phases of flight. In summary, this combination of altitude and airspeed is vital for a safe and controlled transition to landing during an engine-out scenario.

10. Which of the following is NOT a factor in TEM?

A. Human performance

B. Crew resource management

C. Aircraft fuel efficiency

D. Environmental conditions

Choosing aircraft fuel efficiency as the factor that is NOT part of Threat and Error Management (TEM) is correct. TEM focuses on understanding and managing human performance factors, crew resource management, and environmental conditions that affect safety and decision-making during flight operations. Human performance is crucial in TEM as it involves training pilots to recognize and address threats and errors proactively. Crew resource management emphasizes teamwork and communication within the cockpit, ensuring that crew members work together effectively to manage tasks and mitigate risks. Environmental conditions, such as weather and operational environments, also play a significant role as they can introduce threats and complicate the decision-making process. In contrast, while aircraft fuel efficiency is important for operational and financial reasons, it does not directly relate to the human factors and risk management focus of TEM. This principle is primarily concerned with the human aspects of aviation safety rather than the mechanical or efficiency-based metrics of the aircraft itself.