Instrument Refresher Course (IRC) Practice Test (Sample)

Study Guide

BY EXAMZIFY

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Questions

1. What is the preferred order for refueling stop fields according to the guidelines?

A. Non-contract FBOs, Military installations, Contract FBOs

B. Contract FBOs, Military installations, Non-contract FBOs

C. Military installations, Non-contract FBOs, Contract FBOs

D. Contract FBOs, Non-contract FBOs, Military installations

2. Before reaching the FAF for a coupled ILS approach, what must you do?

A. Confirm altitude

B. Advise ATC you are conducting a coupled approach

C. Reduce speed

D. Change approach configuration

3. What altitude constraint applies to the 45/180° method on approach?

A. Descend at any time during the maneuver

B. Only after the aircraft is at the final approach fix

C. Beginning descent outbound abeam a specific VORTAC

D. There are no altitude constraints

4. What is included in the definition of the runway environment?

A. Threshold markings, visual approach slope indicators, and threshold lights

B. Traffic lights near the runway

C. The wind direction indicator

D. Pilot's viewpoint

5. What should be done if the VOR or TACAN indications show unreliable data?

A. Immediately switch to another navigation method

B. Continue to rely on the current instruments

C. Trust the visual cues outside

D. Seek confirmation of readings before taking action

6. How can wake turbulence be avoided?

- **A. By maintaining a constant altitude.**
- **B. By visualizing the vortex location and avoiding it.**
- **C. By flying directly behind a larger aircraft.**
- **D. By increasing speed during descent.**

7. Under what condition can an aircraft fly an instrument approach procedure (IAP) of a lower category?

- **A. It can never be done**
- **B. Only with MAJCOM authorization**
- **C. Only for its own category or higher**
- **D. If both the pilot and aircraft qualify**

8. What is required to calculate a lead-point for a course intercept?

- **A. The desired course significance.**
- **B. The latitude and longitude of the NAVAID.**
- **C. The aircraft's ground speed and the angle of intercept.**
- **D. The wind direction and speed.**

9. What must PICs ensure regarding landing lights?

- **A. Landing lights are illuminated only at night**
- **B. Landing lights should be off above 10,000' MSL**
- **C. Landing lights are illuminated below 10,000' MSL, day or night**
- **D. Landing lights must be used only during approach**

10. What is required before accepting a clearance for a STAR?

- **A. Confirm fuel status and battery level**
- **B. Ensure compliance with altitude and airspeed restrictions**
- **C. Determine the estimated time of arrival**
- **D. Adjust navigation system to local frequencies**

Answers

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

Explanations

1. What is the preferred order for refueling stop fields according to the guidelines?

A. Non-contract FBOs, Military installations, Contract FBOs

B. Contract FBOs, Military installations, Non-contract FBOs

C. Military installations, Non-contract FBOs, Contract FBOs

D. Contract FBOs, Non-contract FBOs, Military installations

The preferred order for refueling stop fields is based on the guidelines that prioritize efficiency, cost-effectiveness, and service quality. Contract Fixed Base Operators (FBOs) are generally the preferred choice for refueling due to their established agreements, which typically provide lower fuel prices and priority service for operators who have contracted with them. This can help ensure a smoother and more efficient refueling process, as they are incentivized to maintain a high standard of service. Military installations can be a secondary option when planning refueling stops, as they often provide fuel services without the typical commercial markup. They may also have advantageous locations or access that can be beneficial for flight routing. Non-contract FBOs, while they can still provide refueling services, are generally considered less preferable in this context since their pricing and service levels can be more variable, which may lead to delays or higher costs. Thus, the correct order begins with Contract FBOs, followed by Military installations. Non-contract FBOs are recommended last due to the risks associated with unpredictable costs and service.

2. Before reaching the FAF for a coupled ILS approach, what must you do?

A. Confirm altitude

B. Advise ATC you are conducting a coupled approach

C. Reduce speed

D. Change approach configuration

Before reaching the Final Approach Fix (FAF) for a coupled Instrument Landing System (ILS) approach, it is essential to advise Air Traffic Control (ATC) that you are conducting a coupled approach. This communication ensures that ATC is aware of your intention to utilize the autopilot for the approach, which can be critical for maintaining situational awareness in busy airspace and for ensuring that any required separation from other aircraft is maintained. Notifying ATC about your approach method allows them to provide the necessary traffic advisories and allows other aircraft in the vicinity to be aware of your approach, facilitating safe and effective air traffic management. This step is crucial, especially in controlled airspace where multiple aircraft might be operating on similar or intersecting flight paths. In contrast, while confirming altitude, reducing speed, and changing approach configuration are important tasks during the approach, these actions are not specifically required to be done before reaching the FAF in the context of coupling the approach. They may be routine aspects of preparing for landing but do not replace the need for notifying ATC of the flight mode being used.

3. What altitude constraint applies to the 45/180° method on approach?

A. Descend at any time during the maneuver

B. Only after the aircraft is at the final approach fix

C. Beginning descent outbound abeam a specific VORTAC

D. There are no altitude constraints

The correct answer reflects the requirement that during the 45/180° maneuver, the descent should begin when the aircraft is outbound and abeam a specified VORTAC. This maneuver is typically employed in circling approaches or when executing a missed approach, where precise altitude management is critical for maintaining safe vertical separation from the terrain and for adhering to approach procedures. Beginning the descent specifically when the aircraft is abeam the VORTAC provides a clear point in the procedure to ensure that the descent is executed safely and that the aircraft is positioned correctly for the subsequent legs of the approach. This timing allows pilots to have a defined point in their navigation where they can start their descent while ensuring adequate altitude is maintained during the outbound leg of the maneuver. The other options may not align with the standard operating procedures for this approach method, as they either suggest a lack of constraints or inappropriate timing for descent, which could lead to safety issues in actual flight operations. Thus, adhering to the altitude constraint while implementing this technique is essential for maintaining safe flight practices.

4. What is included in the definition of the runway environment?

A. Threshold markings, visual approach slope indicators, and threshold lights

B. Traffic lights near the runway

C. The wind direction indicator

D. Pilot's viewpoint

The definition of the runway environment encompasses all components that contribute to the operational safety and guidance of aircraft during takeoff and landing phases. The correct answer highlights specific elements such as threshold markings, which indicate the beginning of the runway available for landing, visual approach slope indicators (VASIs), which provide vertical guidance to pilots, and threshold lights that further illuminate the runway threshold to enhance visibility during landing. These components are essential for pilots as they prepare to land or take off, as they provide critical visual cues about the position and alignment of the runway. The inclusion of these elements ensures that pilots can clearly understand the layout and available space on the runway, which is crucial for safe flight operations. On the other hand, traffic lights near the runway, the wind direction indicator, and a pilot's viewpoint, while important in aviation, do not form part of the standard definition of the runway environment as they pertain to different aspects of flight operations that may not directly relate to the runway itself.

5. What should be done if the VOR or TACAN indications show unreliable data?

A. Immediately switch to another navigation method

B. Continue to rely on the current instruments

C. Trust the visual cues outside

D. Seek confirmation of readings before taking action

When VOR or TACAN indications display unreliable data, seeking confirmation of the readings before taking action is the most appropriate response. This approach allows pilots to ensure they are not acting on faulty information, which can lead to navigational errors or dangerous situations. By verifying the accuracy of the navigational aids or cross-checking with other instruments, pilots can make informed decisions and maintain safety. It's important to consider other navigation methods and visual cues as potential alternatives, but these should only be employed after confirming that the primary instruments are indeed unreliable. This careful validation process minimizes the risk of making erroneous navigational choices based solely on potentially inaccurate data from the VOR or TACAN systems.

6. How can wake turbulence be avoided?

A. By maintaining a constant altitude.

B. By visualizing the vortex location and avoiding it.

C. By flying directly behind a larger aircraft.

D. By increasing speed during descent.

The correct answer focuses on visualizing the vortex location and avoiding it. Wake turbulence is created by an aircraft as it moves through the air, producing rotating vortices that can be hazardous to smaller aircraft. These vortices typically occur behind larger aircraft and can persist for several minutes after the aircraft has passed. By visualizing the location of these vortices, pilots can strategize their flight paths to keep a safe distance from them. This involves understanding the typical positions where vortices can develop and planning to avoid flying through these areas, especially during takeoff and landing phases when the risks are heightened. Maintaining a constant altitude, flying directly behind a larger aircraft, or increasing speed during descent do not effectively mitigate the risk posed by wake turbulence. In fact, flying directly behind a larger aircraft would increase exposure to its wake. Simply climbing or maintaining altitude does not account for the horizontal distance needed from the vortices, and increasing speed during descent could potentially lead to a loss of control in turbulent conditions rather than providing a safer flight environment.

7. Under what condition can an aircraft fly an instrument approach procedure (IAP) of a lower category?

A. It can never be done

B. Only with MAJCOM authorization

C. Only for its own category or higher

D. If both the pilot and aircraft qualify

An aircraft can fly an instrument approach procedure (IAP) of a lower category if it is certified and capable of performing that approach safely. This allowance is primarily based on the aircraft's performance characteristics and the pilot's qualifications. When considering why this option is correct, it's essential to understand that IAPs are categorized based on the aircraft's approach speed and performance capability. While it is acceptable for a more capable aircraft to execute an approach designed for a lower category, it is crucial that the pilot has the necessary training and qualifications for that specific maneuver. This ensures not only compliance with regulations but also safety during the approach. For example, if a higher category aircraft meets the requirements for an approach intended for a lower category, and the pilot is trained for instrument approaches generally, then flying that procedure is permissible. This flexibility allows for more adaptable and efficient use of the airspace and enhances operational safety, provided that the conditions of the IAP are met and understood by the pilot.

8. What is required to calculate a lead-point for a course intercept?

A. The desired course significance.

B. The latitude and longitude of the NAVAID.

C. The aircraft's ground speed and the angle of intercept.

D. The wind direction and speed.

To calculate a lead-point for a course intercept, understanding the aircraft's ground speed and the angle of intercept is crucial. The ground speed indicates how fast the aircraft is traveling over the ground, while the angle of intercept refers to the angle at which the aircraft will approach the desired flight path or course. By knowing these two parameters, a pilot can determine how far in advance of the desired course to initiate a turn or correction, allowing for the necessary time and distance to adjust the aircraft's path effectively. This calculation is vital for ensuring that the aircraft intersects the course at the correct point, thus maintaining efficient navigation and safety. Considering the other options, the desired course significance relates more to the importance of the course rather than the mathematical calculation for the lead-point. The latitude and longitude of a NAVAID provide references for navigation but do not directly influence the lead-point calculation. Wind direction and speed can affect the aircraft's actual path over the ground, but they are not essential for calculating the lead-point itself, though they might require additional adjustments after establishing the initial lead-point calculation.

9. What must PICs ensure regarding landing lights?

A. Landing lights are illuminated only at night

B. Landing lights should be off above 10,000' MSL

C. Landing lights are illuminated below 10,000' MSL, day or night

D. Landing lights must be used only during approach

The requirement for landing lights to be illuminated below 10,000 feet MSL, day or night, is rooted in enhancing visibility and safety during critical phases of flight, particularly during takeoff and landing. This practice improves the conspicuity of the aircraft to both other pilots and ground personnel, decreasing the likelihood of midair collisions and facilitating better situational awareness for those on the ground. Illuminating landing lights during these phases provides visual cues that are vital for operation in both day and night conditions. It ensures that the aircraft is more easily seen, which is essential in busy airspace or when approaching airports. The other options do not align with the safety protocols established for flight operations. For instance, limiting the use of landing lights solely to nighttime does not consider the situations during the day when enhanced visibility can still be beneficial. Additionally, turning off landing lights above 10,000 feet MSL might compromise safety in busy traffic areas. Lastly, restricting the use of landing lights to just the approach disregards their importance during takeoff and taxi operations as well.

10. What is required before accepting a clearance for a STAR?

A. Confirm fuel status and battery level

B. Ensure compliance with altitude and airspeed restrictions

C. Determine the estimated time of arrival

D. Adjust navigation system to local frequencies

Before accepting a clearance for a Standard Terminal Arrival (STAR), it is essential to ensure compliance with altitude and airspeed restrictions. STAR procedures often include specific instructions on how pilots should manage their altitude and airspeed during the arrival phase in order to maintain safe separation from other aircraft and organize the flow of traffic into the terminal area. This adherence is crucial for ensuring safety and efficiency in busy airspace. Following altitude and airspeed restrictions also helps in maintaining optimal aircraft performance and allows for smoother transitions from the en-route phase to the approach phase. This careful attention to procedural requirements is critical, as it significantly contributes to the overall safety and effectiveness of the arrival process into an airport.