Basic Operations Flight Certification Practice Exam (Sample)

Study Guide

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Questions

1. **If a pilot experiences a two-way radio communication failure while in Class D airspace, what should he or she do with the transponder?**
   - **A. Set it to code 7700**
   - **B. Set it to code 7600**
   - **C. Leave it unchanged**
   - **D. Turn it off**

2. **What is the minimum flight visibility required during the day when flying a small RPA at or above 1,000 feet AGL?**
   - **A. One mile**
   - **B. Two miles**
   - **C. Three miles**
   - **D. Five miles**

3. **Name the primary manual that outlines flight operations procedures.**
   - **A. Aircraft Maintenance Manual (AMM)**
   - **B. Flight Operations Guide (FOG)**
   - **C. Pilot Operating Handbook (POH)**
   - **D. Air Traffic Control Procedures (ATCP)**

4. **What is the primary benefit of using autopilot during flight?**
   - **A. To reduce pilot workload and enhance accuracy.**
   - **B. To allow pilots to relax during long durations without vigilance.**
   - **C. To save fuel during the flight.**
   - **D. To assist in communication with air traffic control.**

5. **What is required before a VFR aircraft can enter Class C airspace?**
   - **A. Two-way radio contact with ATC**
   - **B. Authorization from the airspace operator**
   - **C. Clearance from the appropriate ATC unit**
   - **D. Setting altimeter to standard pressure**

6. Where must RPAS operations remain according to regulations?

- **A. In controlled airspace only**
- **B. Under visual line-of-sight**
- **C. In Canadian domestic airspace**
- **D. Above urban areas**

7. What does the acronym "PFD" stand for in aviation?

- **A. Professional Flight Data**
- **B. Pilot Flight Display**
- **C. Primary Flight Display**
- **D. Public Flight Dashboard**

8. When must small RPA give way to manned aircraft?

- **A. Only at specific altitudes**
- **B. When instructed by air traffic control**
- **C. At all times**
- **D. Only in hazardous conditions**

9. Which of the following is NOT part of the normal operating procedures for RPAs?

- **A. Pre-flight checks**
- **B. Take-off procedures**
- **C. Emergency landings**
- **D. Launch procedures**

10. Which of the following must be specified regarding communications during a flight request?

- **A. The type of communication devices used**
- **B. The means of two-way communications with air traffic control**
- **C. The time it takes to set up communications**
- **D. The backup systems for communication**

Answers

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

Explanations

1. If a pilot experiences a two-way radio communication failure while in Class D airspace, what should he or she do with the transponder?

A. Set it to code 7700

B. Set it to code 7600

C. Leave it unchanged

D. Turn it off

In the event of a two-way radio communication failure while operating in Class D airspace, the correct action is to set the transponder to code 7600. This communication failure code is specifically designated for situations where a pilot cannot establish or maintain communication with air traffic control (ATC). When a pilot sets the transponder to 7600, it alerts ATC and other aircraft in the vicinity that the aircraft is experiencing communication difficulties. By doing so, the transponder helps ensure that the pilot remains visible to ATC, which enhances safety and allows for appropriate separation and traffic management, even though the pilot cannot communicate verbally. Other responses, such as leaving the transponder unchanged or turning it off, would not effectively communicate the emergency status to ATC, potentially leading to confusion and safety risks in the airspace. Setting the transponder to the correct code is a critical step in managing the situation effectively.

2. What is the minimum flight visibility required during the day when flying a small RPA at or above 1,000 feet AGL?

A. One mile

B. Two miles

C. Three miles

D. Five miles

The minimum flight visibility required during the day when operating a small Remotely Piloted Aircraft (RPA) at or above 1,000 feet Above Ground Level (AGL) is indeed one mile. This requirement is established by regulatory guidelines to ensure that operators can maintain visual reference with the aircraft and be aware of other air traffic and obstacles. When flying at greater altitudes, the need for visibility is critical for safe operation and situational awareness. One mile of visibility allows the pilot to effectively navigate and avoid potential collisions while ensuring that the RPA remains within visual line-of-sight, which is essential for safe operations. The requirement also supports the pilot's ability to make timely decisions based on visual cues from the environment, contributing to overall flight safety. Higher visibility requirements typically apply to different conditions, such as in controlled airspace or when the RPA operates at lower altitudes, where increased proximity to other air traffic may necessitate greater visibility to enhance safety further.

3. Name the primary manual that outlines flight operations procedures.

A. Aircraft Maintenance Manual (AMM)

B. Flight Operations Guide (FOG)

C. Pilot Operating Handbook (POH)

D. Air Traffic Control Procedures (ATCP)

The primary manual that outlines flight operations procedures is the Flight Operations Guide (FOG). This manual provides essential guidelines and standard operating procedures that pilots and crew members must follow during flight operations. It covers a wide range of topics including pre-flight procedures, in-flight management, and emergency protocols, ensuring that all personnel are informed and able to operate the aircraft safely and efficiently. While the Pilot Operating Handbook (POH) is an important resource for pilots as it contains specific information about the aircraft's performance, systems, and limitations, it is primarily focused on the individual aircraft rather than broader flight operation procedures. The Aircraft Maintenance Manual (AMM) is concerned with the maintenance and repair of the aircraft, outlining the technical and mechanical aspects necessary for ensuring the airworthiness of the aircraft. Air Traffic Control Procedures (ATCP) focus on communications and protocols between pilots and air traffic control, and while critical for safe operations, they do not provide the comprehensive operational procedures aimed at the flight crew. Thus, the Flight Operations Guide serves as the complete reference for the operational guidelines necessary for conducting safe and effective flight operations, making it the primary manual in this context.

4. What is the primary benefit of using autopilot during flight?

A. To reduce pilot workload and enhance accuracy.

B. To allow pilots to relax during long durations without vigilance.

C. To save fuel during the flight.

D. To assist in communication with air traffic control.

Using autopilot primarily benefits pilots by significantly reducing their workload and enhancing the accuracy of flight operations. When autopilot is engaged, it can help maintain the aircraft's heading, altitude, and speed automatically, allowing pilots to focus on other important tasks. This capability is particularly valuable during long flights or during phases of flight that may be repetitive, such as cruising altitude. By alleviating some of the continuous manual control demands on pilots, autopilot systems enable them to monitor instruments, perform checklists, and prepare for upcoming phases of flight more effectively. This improved management of attention and resources contributes to safer and more efficient operation of the aircraft. Autopilot does not primarily serve to let pilots relax, conserve fuel, or assist with communications, although there may be some indirect benefits in those areas. However, the central purpose remains the reduction of workload and enhancement of precision in handling the aircraft.

5. What is required before a VFR aircraft can enter Class C airspace?

A. Two-way radio contact with ATC

B. Authorization from the airspace operator

C. Clearance from the appropriate ATC unit

D. Setting altimeter to standard pressure

Before a VFR aircraft can enter Class C airspace, establishing two-way radio communication with the Air Traffic Control (ATC) that manages that airspace is mandatory. This requirement ensures that the pilot can receive instructions and updates from ATC while operating within the controlled airspace. Communication includes acknowledging the ATC's instructions, which confirms that the pilot has received and understands the necessary information to maintain safe operations alongside other aircraft. While clearance or authorization may seem relevant, the specific requirement is based on the need for effective communication with ATC. Establishing this two-way communication allows ATC to manage air traffic within Class C airspace effectively and enhances safety by ensuring that pilots are aware of other traffic and any potential hazards. The establishment of two-way radio contact is indicative of the pilot's compliance with airspace entry requirements, making it crucial for the operation of VFR flights in these environments.

6. Where must RPAS operations remain according to regulations?

A. In controlled airspace only

B. Under visual line-of-sight

C. In Canadian domestic airspace

D. Above urban areas

The correct answer highlights that Remote Piloted Aircraft Systems (RPAS) operations must remain in Canadian domestic airspace according to regulations. This is important because regulations governing RPAS are designed to ensure safe integration into the national airspace system while allowing for proper management of air traffic. Operating within domestic airspace encompasses all authorized regions, which may include controlled and uncontrolled airspaces, depending on the specific operational guidelines. The other potential choices reflect restrictions or considerations that may not encompass the broader geographical requirement. For instance, visual line-of-sight operations are essential for maintaining situational awareness and ensuring safety, but this is just one aspect of RPAS operation rather than a comprehensive boundary. Similarly, while it is vital to consider airspace classification (such as controlled and uncontrolled airspace), restricting operations solely to controlled airspace would limit the flexibility and operational range of RPAS. Finally, operating above urban areas may introduce additional regulatory challenges, such as those concerning safety, privacy, and noise, which do not dictate the broader requirement of remaining within the boundaries of Canadian domestic airspace.

7. What does the acronym "PFD" stand for in aviation?

A. Professional Flight Data

B. Pilot Flight Display

C. Primary Flight Display

D. Public Flight Dashboard

The acronym "PFD" stands for Primary Flight Display in the context of aviation. The Primary Flight Display is a crucial instrument in an aircraft's cockpit that presents the pilot with essential flight information. This typically includes data such as altitude, airspeed, heading, vertical speed, and flight attitude, all of which are critical for safe flight operations. The PFD consolidates multiple types of information into one display so that pilots can quickly and easily interpret their aircraft's performance and status during flight. This centralization of information helps reduce workload and enhances situational awareness for pilots, which is vital, especially in complex flying conditions or during critical phases of flight. While other options may sound plausible, they do not accurately reflect the commonly accepted terminology used in aviation. It's essential for pilots to be familiar with the correct terminology, as it is universally understood within the aviation industry.

8. When must small RPA give way to manned aircraft?

A. Only at specific altitudes

B. When instructed by air traffic control

C. At all times

D. Only in hazardous conditions

Small Remotely Piloted Aircraft (RPA) must give way to manned aircraft at all times because manned aircraft typically have a greater payload, power, and are often operating under direct air traffic control. By prioritizing the safety and operation of manned aircraft, the risk of collisions and accidents is significantly reduced. The regulatory framework governing air traffic emphasizes that all pilots, including those operating small RPA, must yield to manned aircraft whenever there is an encounter in shared airspace. This is vital for maintaining safe flying environments, particularly for manned aircraft that may be descending, ascending, or maneuvering for takeoff and landing. The other scenarios—specific altitudes, instructions from air traffic control, or only in hazardous conditions—do not hold the same weight as the overall mandate for small RPAs to always give way. In practical terms, consistently adhering to this give-way requirement is essential for ensuring that all aircraft operate safely and effectively within the same airspace.

9. Which of the following is NOT part of the normal operating procedures for RPAs?

A. Pre-flight checks

B. Take-off procedures

C. Emergency landings

D. Launch procedures

The correct answer identifies emergency landings as not being part of the normal operating procedures for remotely piloted aircraft (RPAs). Normal operating procedures typically encompass the routine, day-to-day actions that pilots or operators follow to ensure safe and efficient flights. This includes pre-flight checks to verify equipment and system readiness, take-off procedures to ensure smooth departure from the ground, and launch procedures that facilitate the safe initiation of the flight. Emergency landings, on the other hand, are associated with unforeseen circumstances or malfunctions that require immediate action to safely land the aircraft. Since they are not part of pre-established and routine operational practices, but rather a response to emergencies, they fall outside the scope of what is considered "normal operating procedures." Thus, the distinction lies in the proactive established procedures versus reactive measures taken in emergencies.

10. Which of the following must be specified regarding communications during a flight request?

A. The type of communication devices used

B. The means of two-way communications with air traffic control

C. The time it takes to set up communications

D. The backup systems for communication

The requirement to specify the means of two-way communications with air traffic control is fundamental for safe flight operations. Effective communication with air traffic control (ATC) is essential for maintaining situational awareness, coordinating air traffic movements, and ensuring safety during all phases of flight. Establishing a reliable method of two-way communication enhances the pilot's ability to receive instructions, report their position, and respond to ATC queries. This specification is particularly critical in busy airspace environments where clear and instantaneous communication may impact flight safety. It ensures that pilots are equipped to handle unexpected situations or changes in instructions from ATC. The other options, although they may play a role in communication protocols, do not directly address the core requirement of establishing effective communication with ATC, which is a priority for compliance and safety during a flight operation.