FAA Part 107 Drone Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

Questions

1. What measurement should a remote pilot use when considering tower heights?

A. MSL

B. AGL

C. Both MSL and AGL

D. None of the above

2. When is it crucial to establish a maintenance schedule for a small UA?

A. When operating in controlled airspace

B. When weather conditions are uncertain

C. When the manufacturer does not provide a schedule

D. When planning for long-distance flights

3. If you hear an aircraft announcing that it is midfield left downwind to RWY 13, where is the aircraft located?

A. North of the runway

B. East of the runway

C. West of the runway

D. South of the runway

4. What is the required flight visibility for a remote pilot operating near Plantation Airport (JYL)?

A. 5 statute miles

B. 1 statute mile

C. 3 statute miles

D. 2 statute miles

5. Which type of wind shear is considered the most severe at low levels?

A. Microburst

B. Wake turbulence

C. Thermal shear

D. Linear shear

6. Which of the following is considered a factor in safe drone operation?

A. Environmental conditions

B. Battery voltage

C. Payload weight

D. All of the above

7. When is it legal to fly a drone over a crowd?

A. With proper notification

B. When there is no wind

C. Under no circumstances without appropriate waivers

D. Only during daytime

8. What is the maximum altitude for flying a drone under Part 107 regulations?

A. 200 feet AGL

B. 400 feet AGL

C. 500 feet AGL

D. 1000 feet AGL

9. According to 14 CFR part 107, what is the maximum groundspeed for a small UAS?

A. 100 knots

B. 87 knots

C. 90 mph

D. 150 knots

10. What is one key responsibility of the remote pilot in command during drone operations?

A. To ensure aircraft design specifications

B. To comply with all FAA regulations

C. To install the flight control system

D. To maintain the drone's physical appearance

Answers

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

Explanations

1. What measurement should a remote pilot use when considering tower heights?

A. MSL

B. AGL

C. Both MSL and AGL

D. None of the above

When assessing tower heights, remote pilots should consider measurements taken Above Ground Level (AGL). This measurement reflects the height of the tower relative to the ground where the tower is located. Since drone operations are typically conducted at low altitudes in close proximity to structures, measuring heights in AGL is crucial for ensuring safe flight operations and avoiding obstacles. Mean Sea Level (MSL) is concerned with the elevation of points relative to sea level, which can be less relevant when evaluating immediate hazards like towers in the vicinity of the drone's operational area. While MSL can provide useful elevation data in certain contexts, AGL specifically addresses obstacles encountered during typical drone operations. In this context, focussing solely on AGL ensures that remote pilots maintain a clear understanding of the potential risks posed by nearby towers, allowing them to make informed decisions about flight planning and obstacle avoidance.

2. When is it crucial to establish a maintenance schedule for a small UA?

A. When operating in controlled airspace

B. When weather conditions are uncertain

C. When the manufacturer does not provide a schedule

D. When planning for long-distance flights

Establishing a maintenance schedule for a small Unmanned Aircraft (UA) is crucial when the manufacturer does not provide a schedule. Manufacturers typically provide guidelines or recommendations for maintenance based on the expected use and operational environment of the drone. However, if such a schedule is absent, it becomes the operator's responsibility to develop a maintenance plan to ensure safety and airworthiness. A well-defined maintenance schedule helps in identifying potential issues before they impact flight performance. It is essential to include regular inspections, parts replacement, and software updates in this schedule to maintain optimal functionality. The lack of guidance from the manufacturer emphasizes the need for a structured approach to maintenance, which is vital for preventing mechanical failures that could endanger both the drone and people or property on the ground. This diligence in maintenance ultimately contributes to safe and effective operation, regardless of the operational context. In scenarios like operating in controlled airspace, managing uncertain weather conditions, or planning for long-distance flights, having a maintenance schedule is still beneficial, but its establishment is particularly critical when no manufacturer schedule exists, as this situation could lead to increased risk without a structured approach.

3. If you hear an aircraft announcing that it is midfield left downwind to RWY 13, where is the aircraft located?

A. North of the runway

B. East of the runway

C. West of the runway

D. South of the runway

When an aircraft announces that it is midfield left downwind to runway 13, it indicates its position and flight path in relation to the runway. Understanding this requires knowledge of flight pattern terminology. A "left downwind" leg refers to the aircraft flying parallel to the runway on the left side when approaching to land. For runway 13, which is oriented approximately to the north (13 degrees), the left downwind leg would place the aircraft to the east of the runway, heading southbound. Since the aircraft is at "midfield," it is positioned halfway down the runway's length, indicating that it is neither too close to the approach nor the departure end. Thus, an aircraft on the left downwind to runway 13 is located east of the runway, flying in a path that will allow it to make a left turn into a landing approach. This is why the correct answer identifies the aircraft's location as east of the runway.

4. What is the required flight visibility for a remote pilot operating near Plantation Airport (JYL)?

A. 5 statute miles

B. 1 statute mile

C. 3 statute miles

D. 2 statute miles

In the context of flying a drone under the FAA Part 107 regulations, flight visibility requirements are crucial for ensuring the safety of both the drone operations and other airspace users. For operations near airports, such as Plantation Airport (JYL), the visibility requirement is typically set to enhance situational awareness and allow for safe maneuvers. The required flight visibility of 3 statute miles is significant because it adequately allows the remote pilot to maintain visual line of sight with the drone, which is a fundamental requirement of the Part 107 regulations. This visibility ensures that the pilot can see the drone without relying on instruments, which is essential for avoiding obstacles and other aircraft, especially in proximity to an airport where traffic could be more concentrated. In contrast, lower visibility allowances, such as 1 or 2 statute miles, may not provide sufficient assurance that a pilot can safely navigate and avoid hazards. While there are exceptions and different requirements for different airspace classifications, the standard requirement in most cases around airports aligns with the 3 statute miles guideline to promote a safer aerial environment.

5. Which type of wind shear is considered the most severe at low levels?

A. Microburst

B. Wake turbulence

C. Thermal shear

D. Linear shear

Microbursts are considered the most severe type of wind shear at low levels due to their intense and localized nature. A microburst is a powerful column of descending air that can occur during a thunderstorm and is characterized by rapid and dramatic changes in wind direction and speed in a very short distance. This phenomenon can create hazardous conditions for aircraft during takeoff and landing, as it can lead to sudden loss of lift or changes in the aircraft's flight path. Microbursts typically have a diameter of less than 4 kilometers and can produce downdrafts exceeding 6,000 feet per minute, which is extremely dangerous as it can lead to a rapid increase in the risk of an aircraft stall. The severity is further compounded by the fact that microbursts can occur suddenly and without warning, making them particularly challenging for pilots to anticipate and respond to. Other types of wind shear, such as wake turbulence and thermal shear, are present in aviation but do not pose the same level of acute hazard in low-level flight operations as microbursts. Wake turbulence refers to the disturbance in the air caused by the passage of an aircraft and can certainly be dangerous, especially for smaller aircraft following larger ones, but it operates on a different mechanism and is more predictable compared

6. Which of the following is considered a factor in safe drone operation?

A. Environmental conditions

B. Battery voltage

C. Payload weight

D. All of the above

All of the factors listed significantly influence safe drone operation. Environmental conditions, including wind speed, visibility, and precipitation, can affect how a drone performs. High winds can make it difficult to control the drone, while poor visibility can hinder the pilot's ability to see obstacles. Knowing and assessing these conditions is crucial for ensuring safe flight. Battery voltage is another critical factor. A drone's performance and flight time are directly impacted by its battery condition. Monitoring battery voltage helps avoid situations where the drone runs out of power mid-flight, which can lead to crashes or loss of the drone. Payload weight also plays a vital role in safe drone operation. Carrying an excessive load can impair the drone's ability to ascend, maneuver, and land effectively. Understanding the drone's maximum payload capacity helps pilots avoid overloading their equipment, which could lead to safety hazards. Given that each of these elements directly contributes to maintaining the safety and functionality of drone operations, the correct choice encompasses all three factors.

7. When is it legal to fly a drone over a crowd?

A. With proper notification

B. When there is no wind

C. Under no circumstances without appropriate waivers

D. Only during daytime

Flying a drone over a crowd raises significant safety concerns, primarily regarding the potential hazards to people below in the event of an accident or equipment failure. The regulations under Part 107 of the FAA stipulate that operating a drone over non-participating persons without specific waivers is not allowed, as it can pose serious risks. To operate a drone over a group of individuals, a pilot must obtain a waiver that permits such actions, taking into account the safety measures required to mitigate risks. This regulation is designed to protect the public from injuries that could result from the drone falling or malfunctioning. In contrast, the other options suggest scenarios that do not meet legal requirements. Proper notification does not change the inherent risks of flying over crowds, flying in no wind is not a relevant safety consideration in this context, and time of day does not affect the legality of flying over people. Thus, the requirement for appropriate waivers underscores the priority of safety in drone operations over populated areas.

8. What is the maximum altitude for flying a drone under Part 107 regulations?

A. 200 feet AGL

B. 400 feet AGL

C. 500 feet AGL

D. 1000 feet AGL

The maximum altitude for flying a drone under Part 107 regulations is 400 feet above ground level (AGL). This altitude limit is set to minimize the risk of conflicts with manned aircraft, which typically operate at altitudes above 400 feet. Additionally, it helps ensure safe operations in the airspace and maintains the safety of both drone operators and other aircraft in the vicinity. When flying within controlled airspace, it's crucial for drone pilots to stay aware of this altitude restriction unless they have special authorization from the FAA. The regulation is in place to promote safety and to standardize drone flight operations across various operators and locations. Keeping operations below this altitude helps create a clearer separation between unmanned aerial systems and traditional aviation traffic.

9. According to 14 CFR part 107, what is the maximum groundspeed for a small UAS?

A. 100 knots

B. 87 knots

C. 90 mph

D. 150 knots

The maximum groundspeed for a small UAS, as stipulated in 14 CFR part 107, is indeed 87 knots. This regulation is designed to ensure safety in the airspace where these drones operate and establishes a clear limit to the operational capabilities of small unmanned aircraft systems (UAS). The limitation to 87 knots primarily helps maintain a degree of control and safety to prevent conflicts with manned aircraft and aids in managing operational challenges that could arise from varying weather conditions and airspace complexities. Knowing this regulation is critical for remote pilots to ensure compliance with federal aviation standards while operating their drones. Understanding the maximum groundspeed also reinforces the importance of adhering to restrictions, thereby promoting aviation safety and minimizing risks associated with high-speed operations in shared airspace.

10. What is one key responsibility of the remote pilot in command during drone operations?

A. To ensure aircraft design specifications

B. To comply with all FAA regulations

C. To install the flight control system

D. To maintain the drone's physical appearance

One key responsibility of the remote pilot in command during drone operations is to comply with all FAA regulations. This encompasses a variety of rules and guidelines that govern commercial drone use, including but not limited to operational limits, airspace restrictions, and maintaining visual line-of-sight with the drone. Adhering to FAA regulations is crucial for ensuring safety in the national airspace and for minimizing risks to other aircraft, people, and property. Compliance is not only a legal obligation but also a fundamental aspect of responsible drone operation, which helps in maintaining public trust and supporting the integration of drones into broader aviation activities. While ensuring aircraft design specifications and installing flight control systems may be important in other contexts, these tasks are typically outside the responsibilities of the remote pilot in command. Moreover, maintaining the drone's physical appearance, although it can contribute to the overall readiness of the aircraft, is not a primary responsibility in terms of operational safety and regulatory compliance.