Republic Airways Interview Practice Test (Sample)

Study Guide

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Questions

1. **What is the transponder code for emergency?**
   - A. 7500
   - B. 7600
   - C. 7700
   - D. 7800

2. **At what altitude would you intercept the glideslope on an approach plate?**
   - A. At a defined standard altitude
   - B. Plate dependent
   - C. At minimum altitude only
   - D. At the final approach fix only

3. **What factor must be considered when responding to ATC speed commands?**
   - A. Weather conditions
   - B. Aircraft capabilities
   - C. Regulatory limits
   - D. Flight path

4. **What altitude requires the remaining pilot to wear supplemental oxygen?**
   - A. FL230
   - B. FL260
   - C. FL250
   - D. FL240

5. **What is the maximum speed limit in Class C and D airspace below 2500 feet AGL?**
   - A. 200 KIAS
   - B. 250 KIAS
   - C. 300 KIAS
   - D. 400 KIAS

6. What is a microburst?

A. Small scale intense downdrafts that spread outward in all directions

B. A type of heavy precipitation that falls to the ground

C. A weather pattern that indicates stability in the atmosphere

D. A strong upward draft commonly seen in thunderstorms

7. How long should a passenger wait to fly after diving if the dive required a controlled ascent?

A. 12 hours

B. 24 hours

C. 36 hours

D. 48 hours

8. What can be a direct result of flying with fatigue?

A. Enhanced reflexes

B. Improved situational awareness

C. Increased likelihood of accidents

D. Decreased fuel consumption

9. In aviation, when referring to speed, does 120 knots refer to indicated airspeed or ground speed?

A. Indicated airspeed

B. Ground speed

C. True airspeed

D. Calibrated airspeed

10. What is the speed limit during a procedure turn?

A. 250 KIAS

B. 2000 KIAS

C. 180 KIAS

D. 300 KIAS

Answers

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

Explanations

1. What is the transponder code for emergency?

A. 7500

B. 7600

C. 7700

D. 7800

The transponder code for emergency situations is 7700. This code is universally recognized in aviation as a means for pilots to indicate that they are facing a emergency situation, which alerts air traffic control and other aircraft around them that immediate assistance may be required. When a pilot sets their transponder to 7700, it communicates to air traffic services that there is a significant emergency occurring onboard, which could range from technical failures to serious medical issues among the crew or passengers. This code overrides any other assignments and allows for priority handling of the aircraft in distress. The other codes serve different specific purposes: 7500 is associated with unlawful interference or hijacking, 7600 is used to indicate a radio communication failure, and 7800 does not correspond to any standard aviation emergency code. Each of these serves an important role in aviation safety, but when it comes to signaling a general emergency, 7700 is the appropriate choice.

2. At what altitude would you intercept the glideslope on an approach plate?

A. At a defined standard altitude

B. Plate dependent

C. At minimum altitude only

D. At the final approach fix only

The correct answer is that intercepting the glideslope is plate dependent. This means that the specific altitude at which you will intercept the glideslope can vary based on the particular approach procedure being followed as outlined on the approach plate. Different airports and approaches may have different requirements or characteristics that define the proper intercept altitude. This can include things like terrain considerations, obstacles in the area, and the design of the approach itself. For instance, some approach plates may specify a certain altitude for glideslope interception that is higher or lower than what might be specified on another plate for a different runway or approach. Thus, pilots must always refer to the relevant approach plate for the specifics of the procedure they are executing, ensuring they follow the required guidelines and altitudes related to the glideslope interception. In contrast, the other options present more rigid interpretations of intercept altitude, which do not account for the variable nature of aviation approaches based on specific flight procedures.

3. What factor must be considered when responding to ATC speed commands?

A. Weather conditions

B. Aircraft capabilities

C. Regulatory limits

D. Flight path

When responding to Air Traffic Control (ATC) speed commands, regulatory limits are an essential factor to consider. Air traffic regulations set specific speed limits for different phases of flight, which must be adhered to for safety and efficiency in the airspace system. These limits can vary based on factors such as the type of airspace, altitude, and whether the aircraft is operating at or near its maximum performance parameters. Understanding these regulatory frameworks ensures that pilots operate within legal safety margins, reducing the risk of incidents in busy airspace and ensuring compliance with air traffic directives. Additionally, adherence to these regulations is critical for maintaining safe separation between aircraft and effective traffic management in controlled airspace. Thus, recognizing the relevance of regulatory limits is key when responding to speed commands from ATC, as it encompasses both safety and legal considerations.

4. What altitude requires the remaining pilot to wear supplemental oxygen?

A. FL230

B. FL260

C. FL250

D. FL240

The requirement for a remaining pilot to wear supplemental oxygen is based on regulations concerning cabin pressure and altitude. When the altitude reaches FL250 (25,000 feet) and above, regulations typically state that pilots must use supplemental oxygen if they are flying alone in the cockpit (i.e., the remaining pilot after one has exited due to incapacitation). This requirement is especially important to ensure that the pilot has sufficient cognitive and physical capabilities to operate the aircraft safely in a reduced oxygen environment often found at higher altitudes. Although the altitude at which these rules begin to apply can vary by specific regulations and conditions, the critical point is that at FL250, the likelihood of experiencing hypoxia, a deficiency of oxygen reaching the tissues, increases significantly. This poses a safety risk, making the use of supplemental oxygen essential for the remaining pilot to maintain alertness and prevent any impairment that would compromise flight safety. Thus, at FL250, the requirement is explicitly clear that the remaining pilot must wear supplemental oxygen, ensuring they can effectively manage the aircraft in critical phases of flight.

5. What is the maximum speed limit in Class C and D airspace below 2500 feet AGL?

A. 200 KIAS

B. 250 KIAS

C. 300 KIAS

D. 400 KIAS

The maximum speed limit in Class C and D airspace below 2500 feet AGL is indeed 200 KIAS (Knots Indicated Airspeed). This regulation is in place to enhance safety in areas where there is typically a higher density of aircraft operations, including at airports and during approach and departure phases. Limiting the speed to 200 KIAS helps reduce the potential for wake turbulence and contributes to better traffic management within the controlled airspace, where pilots may be operating at lower altitudes and closer to other aircraft. Compliance with this speed restriction is crucial, particularly for pilots operating in controlled airspace, to ensure the safety of all aircraft and to facilitate smoother operations in busy airspaces. In contrast, higher speed limits in other airspace classes, such as in the upper altitudes of Class E or outside of certain controlled environments, may allow for faster speeds, but in Class C and D airspace specifically below 2500 feet AGL, the 200 KIAS limit applies.

6. What is a microburst?

A. Small scale intense downdrafts that spread outward in all directions

B. A type of heavy precipitation that falls to the ground

C. A weather pattern that indicates stability in the atmosphere

D. A strong upward draft commonly seen in thunderstorms

A microburst is characterized as a small-scale yet highly intense downdraft that typically occurs during certain types of thunderstorms. When this downdraft reaches the ground, it spreads outward in all directions at remarkably high speeds. This phenomenon can create hazardous wind conditions, particularly for aircraft during takeoff and landing stages, as the sudden change in wind direction and speed can lead to loss of control. The other choices lack the accurate depiction of what a microburst is. For instance, heavy precipitation may associate with thunderstorms but does not accurately define a microburst. Similarly, stability in the atmosphere denotes different atmospheric phenomena and is not relevant to the violent, turbulent nature of a microburst. Lastly, while strong upward drafts are indeed seen in thunderstorms, they are not the defining feature of a microburst, which is specifically concerned with the intense downward motion and subsequent outflow of air from the storm.

7. How long should a passenger wait to fly after diving if the dive required a controlled ascent?

A. 12 hours

B. 24 hours

C. 36 hours

D. 48 hours

The recommended wait time for a passenger to fly after diving, particularly following a dive that required a controlled ascent, is indeed 24 hours. This guideline is based on the need to allow sufficient time for any potential nitrogen bubbles that may have formed in the body during the dive to dissipate fully. When a diver ascends, nitrogen absorbed into the body at depth can expand and potentially form bubbles as pressure decreases. If a diver flies before adequate time has passed, the change in altitude and pressure in an aircraft could exacerbate bubble formation, leading to decompression sickness, which can be a serious and sometimes life-threatening condition. Waiting 24 hours provides a safety buffer to minimize this risk and ensures that the body has adequately eliminated the nitrogen absorbed during diving. This recommendation aligns with guidelines from diving and aviation safety organizations, which help to standardize practices for the well-being of passengers who participate in both activities.

8. What can be a direct result of flying with fatigue?

A. Enhanced reflexes

B. Improved situational awareness

C. Increased likelihood of accidents

D. Decreased fuel consumption

Flying with fatigue can significantly impair a pilot’s cognitive and physical abilities, leading to a decreased level of alertness and slower reaction times. This impaired state can result in reduced situational awareness, meaning the pilot may not accurately perceive or respond to critical changes in the environment, such as unexpected weather conditions or other aircraft in the vicinity. Additionally, fatigue can negatively affect decision-making processes, causing pilots to make poor judgments or overlook safety protocols. The increased likelihood of accidents stems from these factors. As fatigue compromises essential skills required for flying—such as concentration, coordination, and the ability to process information accurately—there's a heightened risk of errors, which can ultimately lead to incidents or accidents. Recognizing the serious implications of flying while fatigued is crucial for maintaining safety in aviation operations.

9. In aviation, when referring to speed, does 120 knots refer to indicated airspeed or ground speed?

A. Indicated airspeed

B. Ground speed

C. True airspeed

D. Calibrated airspeed

The correct answer pertains to the context in which airspeed is measured in aviation. When we refer to 120 knots in the context of speed, it typically indicates the indicated airspeed (IAS) of the aircraft rather than the ground speed. Indicated airspeed is the speed shown on the aircraft's airspeed indicator and is crucial for understanding how the aircraft behaves in the air, including lift and stall speed. It is important for pilots to rely on IAS when flying because it considers atmospheric pressure and temperature, which affect how the aircraft interacts with the surrounding air. Ground speed, on the other hand, reflects how fast the aircraft is moving across the ground and can differ significantly from indicated airspeed due to wind conditions. For instance, if a plane is flying into a headwind, its ground speed may be less than its indicated airspeed. Conversely, with a tailwind, the ground speed can exceed the indicated airspeed. Selecting ground speed as the answer might seem plausible without proper context since speed is generally referred to in terms of how fast the aircraft is moving relative to the ground during flight operations. However, in most aviation discussions, especially those involving fixed numerical values, the reference is to indicated airspeed.

10. What is the speed limit during a procedure turn?

A. 250 KIAS

B. 2000 KIAS

C. 180 KIAS

D. 300 KIAS

The speed limit during a procedure turn is significant for maintaining safe maneuverability and ensuring compliance with air traffic control directives. The correct speed limit in this context typically is 200 KIAS. This speed helps ensure that pilots can successfully navigate the turn without excessive bank angles or potential loss of control. In contrast, maintaining higher speeds, such as those suggested by the other options like 250 KIAS or 300 KIAS, could lead to difficulties in controlling the aircraft due to increased stall risk and reduced turning capabilities. Therefore, 200 KIAS is recognized as a safe and effective speed for executing a procedure turn, striking a balance between agility and safety. The reference to 180 KIAS, while a plausible speed, is not the standard for procedure turns and is generally meant for different scenarios in terms of maintaining safe operational parameters. Thus, adherence to the 200 KIAS speed limit ensures that pilots can handle the turn with the appropriate control and margin of safety.