ERAU Commercial Checkride Practice Test (Sample)

Study Guide

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Questions

1. What is a common symptom of hypoxia?

A. Nausea

B. Headache

C. Fatigue

D. Constipation

2. What does a yellow tag indicate in aircraft maintenance?

A. Routine check completed

B. Equipment repaired, replaced, installed with airworthiness release

C. Aircraft is ready for service

D. Equipment is in need of replacement

3. How is a fatal injury categorized in aviation?

A. Death occurring within 14 days of the incident

B. Death occurring within 30 days of the accident

C. Any serious injury leading to hospitalization

D. Injury resulting in flight delays

4. Diving should be avoided for how long after exposure to higher altitudes?

A. 6 hours

B. 12 hours

C. 24 hours

D. 48 hours

5. When must an immediate notification be made to the NTSB?

A. For any scheduled maintenance activities

B. For property damage over $25,000 only

C. For accidents, flight control malfunctions, or inflight fires

D. For all aircraft incidents regardless of severity

6. What type of hydraulic fluid is commonly referenced in aviation systems?

A. H-5606 green

B. H-5606 blue

C. H-5606 red

D. H-5606 clear

7. What might FAA inspectors review to determine common carriage?

A. A summary of flight hours

B. The purpose of the flights and compensation

C. Aircraft maintenance history

D. Flight school attendance records

8. What is rime ice characterized by?

A. Heavy and clear

B. A milky or opaque appearance

C. Very light and formed during warm temperatures

D. A smooth and water-like texture

9. How much can light sensitivity increase after 30 minutes in darkness?

A. 100X

B. 1,000X

C. 10,000X

D. 100,000X

10. What color indicates you are on glide path in a tri-color VASI?

A. Amber

B. Green

C. Red

D. Yellow

Answers

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

Explanations

1. What is a common symptom of hypoxia?

A. Nausea

B. Headache

C. Fatigue

D. Constipation

Headache is a common symptom of hypoxia because when the body is deprived of adequate oxygen, it can trigger various physiological responses. The brain, being particularly sensitive to oxygen levels, may signal discomfort through pain when it is not receiving enough oxygen, leading to headaches. Hypoxia can affect neurological function and the regulation of blood flow, which may contribute to the sensation of pain that we categorize as a headache. Nausea, fatigue, and constipation can occur due to a variety of factors and are less specific to hypoxia. While they may accompany a hypoxic condition in some individuals, headache stands out as a more direct and immediate symptom associated with oxygen deprivation. Recognizing this symptom is crucial for pilots and others flying at high altitudes, as it can prompt timely intervention to restore adequate oxygen levels before more severe symptoms develop.

2. What does a yellow tag indicate in aircraft maintenance?

A. Routine check completed

B. Equipment repaired, replaced, installed with airworthiness release

C. Aircraft is ready for service

D. Equipment is in need of replacement

A yellow tag in aircraft maintenance signifies that equipment has been repaired, replaced, or installed, accompanied by an airworthiness release. This tagging system is critical for ensuring that all components of an aircraft comply with regulatory standards and are suitable for safe operation. The yellow tag serves as a documentation method that provides a clear record of the work performed on the equipment, confirming that it meets the necessary safety and performance criteria before being put back into service. It is essential to differentiate this from other potential meanings of tags. For instance, a routine check completed or an aircraft being ready for service might typically be indicated by other color tags, which serve different purposes in maintenance tracking. Additionally, the indication of replacement needs would usually be marked differently, conveying a warning or status specifically about the necessity for further action on a particular piece of equipment. Therefore, the yellow tag's role in confirming airworthiness and the successful completion of maintenance activities is crucial in aviation safety and compliance.

3. How is a fatal injury categorized in aviation?

A. Death occurring within 14 days of the incident

B. Death occurring within 30 days of the accident

C. Any serious injury leading to hospitalization

D. Injury resulting in flight delays

A fatal injury in aviation is categorized as a death occurring within 30 days of the accident. This timeframe is important because it allows for a comprehensive understanding of the incident's impact on the individuals involved. The 30-day period is defined by regulatory bodies, such as the National Transportation Safety Board (NTSB) and the International Civil Aviation Organization (ICAO), as it provides a standard method for determining which injuries are linked to the accident. Recognizing this timeframe is crucial for both regulatory reporting and safety management practices, as it affects how incidents are investigated and prevents similar occurrences in the future. Furthermore, this classification helps analyze the severity and outcomes of aviation incidents, aiding in the enhancement of safety protocols and measures. Other considerations, like serious injuries leading to hospitalization, do not categorize a fatal injury but rather surround non-fatal accidents and their consequences.

4. Diving should be avoided for how long after exposure to higher altitudes?

A. 6 hours

B. 12 hours

C. 24 hours

D. 48 hours

The correct answer is based on the physiological considerations of how altitude affects the body, particularly regarding the risk of decompression sickness when transitioning between higher altitudes and underwater activities. After exposure to higher altitudes, such as when a pilot flies at elevated flight levels, the body undergoes changes in pressure and gas absorption. During ascent to high altitudes, nitrogen is absorbed differently into the body tissues. When descending to sea level or higher pressure environments, or engaging in activities like diving, nitrogen can come out of solution and form bubbles, leading to decompression sickness, commonly referred to as "the bends." The recommended waiting period of 24 hours after spending time at high altitudes before diving is based on a conservative approach to ensuring that the body has sufficiently eliminated excess nitrogen from its tissues. This timeframe allows for the reduction of nitrogen levels in the bloodstream, thereby minimizing the risk of decompression sickness during the descent into higher pressure environments underwater. Less than 24 hours could increase the risk of complications due to insufficient time for nitrogen elimination. Therefore, adhering to the 24-hour guideline is crucial for ensuring safety during diving activities following exposure to higher altitudes.

5. When must an immediate notification be made to the NTSB?

A. For any scheduled maintenance activities

B. For property damage over $25,000 only

C. For accidents, flight control malfunctions, or inflight fires

D. For all aircraft incidents regardless of severity

An immediate notification must be made to the NTSB for specific serious events, particularly accidents, flight control malfunctions, or inflight fires. This requirement is in place because such situations represent significant safety concerns and can have broader implications for aviation safety. When an accident occurs, it is crucial to alert the NTSB promptly to ensure that they can initiate an investigation to determine the cause and prevent similar incidents from happening in the future. Flight control malfunctions or inflight fires pose immediate risks to the safety of the aircraft and its occupants, which is why they also require immediate reporting. In contrast, not all aircraft incidents necessarily need immediate notification. For example, scheduled maintenance activities or minor incidents without severe consequences do not require immediate reports to the NTSB. Significant thresholds, such as damages over a certain dollar amount, may also not trigger immediate notification if the event does not align with the outlined serious circumstances. The focus is on ensuring that serious safety-related incidents are investigated efficiently, which is why the specific situations mentioned in the correct answer warrant immediate attention.

6. What type of hydraulic fluid is commonly referenced in aviation systems?

A. H-5606 green

B. H-5606 blue

C. H-5606 red

D. H-5606 clear

The commonly referenced hydraulic fluid in aviation systems is H-5606, which is a mineral-based hydraulic fluid specifically designed for aircraft applications. This fluid is typically identified by its red color, making it easily distinguishable from other fluid types. The H-5606 fluid offers favorable characteristics such as good lubrication properties, thermal stability, and resistance to oxidation, which are critical for the performance and safety of hydraulic systems in aviation. The red color is not only a standard for aviation fluids but also helps in identifying leaks, ensuring that operators can promptly address any issues. In contrast to the red H-5606 fluid, other options such as blue, green, or clear would not be appropriate or recognized standards for aviation hydraulic fluids. Their color designations do not align with established hydraulic fluid types used in aviation. Thus, the correct answer reflects the recognized standard used in the industry for aircraft hydraulic systems.

7. What might FAA inspectors review to determine common carriage?

A. A summary of flight hours

B. The purpose of the flights and compensation

C. Aircraft maintenance history

D. Flight school attendance records

The determination of common carriage primarily hinges on the purpose of the flights and the compensation involved. The FAA defines common carriage as the transportation of persons or property for compensation or hire, which includes specific operational characteristics that distinguish it from private operations. In analyzing flights, inspectors look for whether the operator is offering services to the general public and if compensation is received for those services. This includes examining aspects such as whether flights are scheduled, whether they are open to anyone who wishes to book them, and the nature of the payment received. If an operator is conducting flights with compensation that aligns with common carriage principles, it indicates that they are operating as a commercial entity. The other options, while they may provide useful information, do not directly address the criteria that clearly define common carriage. A summary of flight hours, aircraft maintenance history, or flight school attendance records might support operational safety or proficiency but do not inherently provide insight into the nature of the flights and the associated compensation, which are crucial to identifying common carriage.

8. What is rime ice characterized by?

A. Heavy and clear

B. A milky or opaque appearance

C. Very light and formed during warm temperatures

D. A smooth and water-like texture

Rime ice is characterized by a milky or opaque appearance. It forms when supercooled water droplets freeze upon contact with a surface, typically in conditions where there is low temperature and high humidity. This process traps air within the ice as it solidifies, leading to its distinctive cloudy, white look. The opaque nature of rime ice contrasts with other types of ice, such as clear ice, which is formed in different conditions and has a transparent quality due to fewer air bubbles being trapped during its formation. Understanding the formation conditions of rime ice—usually encountered in cloud conditions or fog and at temperatures below freezing—is crucial for pilots, as it significantly affects aircraft performance and safety. It can accumulate on wings and control surfaces, altering aerodynamic characteristics and increasing weight. Recognizing these visual characteristics of rime ice helps pilots make informed decisions to avoid hazardous conditions.

9. How much can light sensitivity increase after 30 minutes in darkness?

A. 100X

B. 1,000X

C. 10,000X

D. 100,000X

The increase in light sensitivity after spending time in darkness can be significant due to the physiological adjustments the eyes undergo. After about 30 minutes in a dark environment, the photoreceptors in the retina, specifically the rods, become more sensitive to light. This adaptation is a gradual process that allows our eyes to perceive lower levels of illumination. In the context of the options provided, the correct choice indicates that the sensitivity can increase by approximately 10,000 times after this duration. This considerable enhancement is due to several factors, including the regeneration of rhodopsin (the visual pigment in rods) and changes in the way the retinal neurons process light signals. This adaptation is crucial for activities in low-light conditions, such as night flying for pilots. A 10,000-fold increase means that what was once undetectable in bright conditions can become visible after enough dark adaptation, effectively allowing better visibility in low-light situations. Understanding this increase is essential for assessing visibility and maintaining situational awareness in various flight environments, especially during night operations.

10. What color indicates you are on glide path in a tri-color VASI?

A. Amber

B. Green

C. Red

D. Yellow

In a tri-color VASI (Visual Approach Slope Indicator), the color green indicates that the aircraft is on the correct glide path. The VASI system is designed to provide visual guidance during the approach and landing phase of flight. When the green light is visible, it signifies that the aircraft is aligned with the optimal glide slope to safely approach the runway. Understanding the function of the other colors can further solidify why green is the correct answer. An amber light typically indicates that the aircraft is slightly above the glide path, while a red light suggests that the aircraft is below the glide path. Therefore, green is the desired indication that assures pilots they are maintaining the proper descent trajectory. Recognizing these light signals is crucial for safe landings in varying visibility conditions.