CRJ550 Systems Knowledge Exam Practice Exam (Sample)

Study Guide

Everything you need from our exam experts!

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- **Practice answering questions under realistic conditions,**
- **Improve accuracy and speed,**
- **Review explanations to strengthen weak areas, and**
- **Approach the exam with greater confidence.**

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here’s how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don’t just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There’s no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

1. What is required to ensure the Cockpit Voice Recorder operates?

A. Aircraft must be stationary

B. Engine must be off

C. DC electrical power must be applied

D. Pilot must activate it manually

2. What action is taken if a bleed air leak is detected?

A. The respective system is shut down

B. Engine parameters are adjusted

C. An alert is sent to the cockpit

D. Flight control adjustments are made

3. Which hydraulic systems must be powered when checking brake wear?

A. System 1 and 2

B. System 2 only

C. System 2 and 3 with the parking brake set

D. System 1, 2, and 3

4. When are the drain masts heated?

A. When the engine starts

B. Whenever 115V AC power is applied

C. Whenever 220V AC power is applied

D. Only during flight

5. At what RPM does the APU starter cut out?

A. 40%-45%

B. 46%-60%

C. 61%-70%

D. 71%-75%

6. What mode maintains the commanded pitch attitude by ensuring selected airspeed?

A. CLB

B. DESCENT

C. MANOEUVRE

D. FLIGHT

7. What powers hydraulic system 3?

A. Two engine driven pumps

B. Two electric hydraulic pumps

C. One engine driven and one electric pump

D. Two manual pumps

8. What is the maximum speed for turbulent air penetration?

A. 250 KIAS/.70 Mach

B. 280 KIAS/.75 Mach

C. 300 KIAS/.80 Mach

D. 320 KIAS/.85 Mach

9. What is the primary means of navigation indicated in the cockpit?

A. Short-range navigation

B. Long-range navigation

C. Visual navigation

D. Radio navigation

10. For approximately how long will emergency lights be powered during an emergency?

A. 5 minutes

B. 10 minutes

C. 15 minutes

D. 20 minutes

Answers

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

Explanations

1. What is required to ensure the Cockpit Voice Recorder operates?

A. Aircraft must be stationary

B. Engine must be off

C. DC electrical power must be applied

D. Pilot must activate it manually

The Cockpit Voice Recorder (CVR) is designed to continuously record conversations and sounds from the cockpit during flight, which is crucial for investigations in the event of an incident. For the CVR to function properly, it requires electrical power. Typically, the CVR is powered by the aircraft's DC electrical system, and it is designed to automatically start recording once electrical power is available whenever the aircraft's systems are operational, regardless of the engine status or whether the aircraft is stationary. In normal operational scenarios, there is no requirement for the pilot to manually activate the CVR; it will automatically record as long as it has power. Therefore, selecting the need for DC electrical power as the requirement for the CVR's operation emphasizes its dependency on the aircraft's electrical systems to function correctly and ensure that it captures crucial flight data.

2. What action is taken if a bleed air leak is detected?

A. The respective system is shut down

B. Engine parameters are adjusted

C. An alert is sent to the cockpit

D. Flight control adjustments are made

When a bleed air leak is detected, the correct action taken is to shut down the respective system. Bleed air is critical for various aircraft systems, including environmental control, engine performance, and anti-icing systems. When a leak occurs, it compromises the efficiency and safety of these systems, as pressurized air is lost, potentially leading to systems failing to operate as intended. Shutting down the affected system is necessary to prevent further complications, such as loss of cabin pressure or overheating. This action prioritizes the safety of the aircraft and its occupants by isolating the issue and mitigating any possible risks associated with the leak. In contrast, adjusting engine parameters, sending alerts to the cockpit, or making flight control adjustments would not directly address the root cause of a bleed air leak and could potentially complicate the situation further, rather than resolving the immediate issue presented by the leak. Overall, shutting down the respective system is the most effective and immediate response to ensure safety and operational integrity.

3. Which hydraulic systems must be powered when checking brake wear?

A. System 1 and 2

B. System 2 only

C. System 2 and 3 with the parking brake set

D. System 1, 2, and 3

When checking brake wear on the CRJ550, it is essential to power System 2 and System 3 while having the parking brake set. System 2 is primarily responsible for the braking system, which includes the main hydraulic power required to operate the brakes effectively. System 3 is also involved in the brake system and is used for the anti-skid and autobrake systems, ensuring all components function correctly during the inspection. By setting the parking brake, you ensure that the aircraft remains stationary while the systems are powered, allowing for an accurate assessment of brake wear without the risk of movement. This approach ensures that all aspects of the braking system are functioning as intended, providing a comprehensive check of brake condition. Conversely, while both System 1 and 2 work together for normal aircraft operations, System 1 is primarily tasked with other systems like landing gear and flight controls. Therefore, powering System 2 and System 3 provides the necessary hydraulic support solely for brake inspection without introducing unnecessary static loads or complexities associated with the full operation of System 1.

4. When are the drain masts heated?

A. When the engine starts

B. Whenever 115V AC power is applied

C. Whenever 220V AC power is applied

D. Only during flight

The drain masts on the CRJ550 are heated whenever 115V AC power is applied. This heating is essential to prevent ice formation in the drain masts, particularly during ground operations. Ice accumulation could obstruct proper drainage, which is critical to ensure that any water or other fluids can exit the system without issue. Heating of the drain masts is not solely dependent on the engine start or flight conditions, as this approach ensures the masts are warmed during the ground operations, making them susceptible to freezing even before takeoff. The application of the correct voltage, in this case, 115V AC, is what activates the heating elements in the drain masts. This keeps the system effective and mitigates potential hazards related to ice accumulation. In contrast, other voltage options mentioned, such as 220V AC, would not be applicable under normal operational circumstances for the heating of the drain masts, as they are specifically designed to function with a 115V AC power source.

5. At what RPM does the APU starter cut out?

A. 40%-45%

B. 46%-60%

C. 61%-70%

D. 71%-75%

The APU starter is designed to cut out when the APU reaches an operational RPM that is sufficient for it to sustain itself without the need for starter assistance. This cutout typically occurs in the range of 46% to 60%. Once the APU RPM reaches this threshold, the starter disengages, allowing the APU to function independently. This operational range ensures that the APU can produce the necessary pneumatic power and electrical energy for aircraft systems without putting unnecessary strain on the starter. Understanding this RPM range is crucial for ensuring proper operation and startup procedures for the auxiliary power unit.

6. What mode maintains the commanded pitch attitude by ensuring selected airspeed?

A. CLB

B. DESCENT

C. MANOEUVRE

D. FLIGHT

The mode that maintains the commanded pitch attitude by ensuring selected airspeed is the CLB mode. In this mode, the aircraft's autopilot system ensures that the pitch attitude aligns with the necessary parameters to achieve and sustain the selected airspeed during climb. This involves adjusting the aircraft's control surfaces to keep the airspeed stable, allowing for a consistent and controlled ascent while avoiding any stalls or excessive speed variations. During climb, maintaining the correct airspeed is crucial for performance and safety, as it directly influences the aircraft's lift and drag characteristics. Therefore, the CLB mode is designed to automatically manage these aspects, allowing the pilot to focus on other operational tasks. The other options relate to different flight profiles. DESCENT mode primarily focuses on controlling the rate of descent rather than maintaining airspeed. MANOEUVRE mode is utilized for more aggressive flight maneuvers, where pitch and bank angles can vary significantly. FLIGHT mode is a more generic term and may not specifically relate to a particular phase where airspeed is the primary concern, making CLB the most specific and appropriate choice for maintaining commanded pitch while ensuring the selected airspeed.

7. What powers hydraulic system 3?

A. Two engine driven pumps

B. Two electric hydraulic pumps

C. One engine driven and one electric pump

D. Two manual pumps

The hydraulic system 3 on the CRJ550 is powered by two electric hydraulic pumps. This choice is correct due to the design intention of system redundancy and reliability. Electric pumps provide an additional layer of capability, especially during operations when mechanical pumps may not be as effective or available, such as during certain phases of flight or on the ground when engines are not running. Utilizing electric pumps enhances the system's responsiveness and allows for more consistent pressure and flow control, which is essential for various critical operations such as flight control surfaces and landing gear. The two electric pumps ensure that there is sufficient hydraulic power available even in case one of the pumps fails, thereby maintaining the system's operational integrity. Other options either suggest the use of engine-driven pumps or manual pumps, which do not reflect the design of the CRJ550's hydraulic system 3, as it specifically relies on electric pumps for its power source. This design choice aligns with modern aviation trends that emphasize electric systems for efficiency and reliability.

8. What is the maximum speed for turbulent air penetration?

A. 250 KIAS/.70 Mach

B. 280 KIAS/.75 Mach

C. 300 KIAS/.80 Mach

D. 320 KIAS/.85 Mach

The maximum speed for turbulent air penetration is set to ensure safety and structural integrity of the aircraft while encountering turbulence. In the context of the CRJ550, this speed is designed to be conservative enough to prevent excessive loads on the airframe and to maintain control during turbulent conditions. The selected maximum speed of 280 KIAS/.75 Mach is well-established within operational procedures for the CRJ series and reflects a balance between maneuverability and safety. Operating at this speed helps ensure that the aircraft remains within its structural limits, allowing pilots to maintain control while navigating through turbulent air. The other speed options exceed this turbulence penetration limit, which could potentially lead to structural strain or loss of control in severe turbulence. Therefore, the chosen maximum speed provides a prudent approach to ensuring both safety and compliance with operational guidelines when flying in turbulent conditions.

9. What is the primary means of navigation indicated in the cockpit?

A. Short-range navigation

B. Long-range navigation

C. Visual navigation

D. Radio navigation

The primary means of navigation indicated in the cockpit of an aircraft like the CRJ550 is long-range navigation. This method utilizes advanced systems that provide accurate positioning data over considerable distances, which is crucial for commercial flight operations. Long-range navigation typically encompasses the use of technologies such as satellite navigation (like GPS), inertial navigation systems, and other forms of navigation aids that can help pilots determine their position and trajectory over long distances, ensuring they remain on course during various phases of flight. While short-range navigation might be applicable during certain phases of flight, such as approach and landing, the primary navigation systems designed for the aircraft's operation focus on long-range capabilities to ensure efficiency and safety. Visual navigation, which relies on the pilot's observation of landmarks or geographic features, is less reliable for consistent navigation, especially at cruising altitudes where visibility may be compromised. Radio navigation, though important, typically supports long-range navigation rather than serving as the primary means by which the aircraft navigates over extended distances. This understanding highlights the central role of long-range navigation systems in modern aviation.

10. For approximately how long will emergency lights be powered during an emergency?

A. 5 minutes

B. 10 minutes

C. 15 minutes

D. 20 minutes

The emergency lights on an aircraft are designed to provide adequate illumination in the event of an emergency, ensuring safety during evacuation procedures. The operational duration of these lights is crucial for maintaining visibility in critical situations. The correct answer is based on the standard design specifications for emergency lighting systems, which allow them to be powered for approximately 10 minutes. This duration is considered sufficient for most emergency scenarios, enabling passengers and crew to evacuate safely while minimizing the risks of accidents in low-light conditions. This 10-minute time frame aligns with regulatory requirements and industry best practices, emphasizing the importance of having reliable and effective emergency lighting in place. Other durations, such as 5, 15, or 20 minutes, may not provide a realistic or practical framework for aircraft emergency lighting systems, as they typically aim to balance battery life with functional needs during emergencies.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

https://crj550systems.examzify.com

We wish you the very best on your exam journey. You've got this!