CRJ550 SYSTEMS KNOWLEDGE EXAM PRACTICE EXAM (SAMPLE)

STUDY GUIDE

SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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 the minimum oxygen pressure required for dispatch with two cockpit crewmembers?

A. 607 psi

B. 707 psi

C. 807 psi

D. 907 psi

2. If the APU electric fuel pump fails while the APU is running, what will happen?

A. The APU will shut down immediately

B. Continue to run but it will not start once it is shutdown

C. The APU will restart automatically

D. The APU will reduce power output

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

A. 40%-45%

B. 46%-60%

C. 61%-70%

D. 71%-75%

4. Is the APU capable of supplying bleed-air to the anti-ice system?

A. Yes, at half the temperature of the engine bleed-air

B. No, the APU is unable to supply bleed-air to the anti-ice system

C. Yes, at the same temperature as the engine bleed-air

D. Yes, but only during taxi

5. When the TOGA switch is activated on the ground, what is one effect?

A. Engages reverse thrust

B. Increases drag

C. Disconnects autopilot

D. Raises landing gear

6. _______ powers the DC SERV BUS.

A. The main battery

B. Both 1 and 2

C. The APU

D. The inverter

7. At what cabin altitude do the passenger oxygen masks automatically deploy?

A. 10,000 feet

B. 12,000 feet

C. 14,000 feet

D. 16,000 feet

8. What percentage of thrust is produced by the ducted air around the engine?

A. 60%

B. 70%

C. 80%

D. 90%

9. What method is used to cool the flight deck avionics?

A. Aviation fans

B. Avionics exhaust fans

C. External fans

D. Thermal blankets

10. What is the maximum altitude for using APU bleed air?

A. 20,000 feet pressure altitude

B. 25,000 feet pressure altitude

C. 30,000 feet pressure altitude

D. 35,000 feet pressure altitude

Answers

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

Explanations

1. What is the minimum oxygen pressure required for dispatch with two cockpit crewmembers?

A. 607 psi

B. 707 psi

C. 807 psi

D. 907 psi

The minimum oxygen pressure required for dispatch with two cockpit crewmembers is established to ensure that there is sufficient oxygen available for both pilots to breathe in case of cabin depressurization. The requirement for 807 psi reflects the regulatory and safety standards set for commercial aviation. This pressure ensures that both crewmembers have an adequate supply of oxygen for emergency situations, considering the duration and altitude at which the aircraft operates. In the context of the CRJ550, maintaining a pressure above this threshold provides a critical margin for safety, as it allows for the provision of supplemental oxygen if necessary during flight operations. While the other pressure levels may represent varying capacities of oxygen systems, they do not meet the specific requirement needed to ensure the safety and wellbeing of both pilots in the event of an emergency.

2. If the APU electric fuel pump fails while the APU is running, what will happen?

A. The APU will shut down immediately

B. Continue to run but it will not start once it is shutdown

C. The APU will restart automatically

D. The APU will reduce power output

When the APU electric fuel pump fails while the APU is running, the system is designed to have a fuel supply mechanism that allows the APU to continue operating normally for a certain period. The APU typically relies on both an electric fuel pump and a mechanical fuel pump to supply fuel. If the electric fuel pump fails but the APU is already running, the mechanical pump can continue to draw fuel from the tank, ensuring the APU does not shut down immediately. However, if the APU is subsequently shut down, the failure of the electric fuel pump means it would not be able to restart the APU because it relies on that electric pump for starting. Therefore, while it will continue to run with the existing fuel supply, once it is shut off, it cannot restart without the electric fuel pump functioning. This understanding illustrates the redundancy built into the APU systems, allowing for continued operation even if one part fails, but highlighting the importance of the electric pump for restart capabilities.

3. 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.

4. Is the APU capable of supplying bleed-air to the anti-ice system?

A. Yes, at half the temperature of the engine bleed-air

B. No, the APU is unable to supply bleed-air to the anti-ice system

C. Yes, at the same temperature as the engine bleed-air

D. Yes, but only during taxi

The auxiliary power unit (APU) on the CRJ550 does not have the capability to supply bleed-air to the anti-ice system. This is because the APU's primary function is to provide electrical power and pneumatic pressure for engine starting and cabin conditioning while on the ground. When it comes to the anti-ice system, the aircraft relies on bleed-air from the engines, which is specifically designed to meet the high demands of this critical system in terms of temperature and pressure. Using engine bleed-air is essential for effective anti-icing performance, as it ensures adequate thermal energy is delivered to the required surfaces to prevent ice accumulation. The engines are designed to provide the necessary bleed-air at the appropriate temperature, which is crucial for the proper functioning of the anti-ice system.

5. When the TOGA switch is activated on the ground, what is one effect?

A. Engages reverse thrust

B. Increases drag

C. Disconnects autopilot

D. Raises landing gear

Activating the TOGA (Takeoff/Go-Around) switch on the ground primarily serves to disconnect the autopilot. This is an important safety feature because the pilot must have complete control of the aircraft during critical phases such as takeoff and go-around. Engaging TOGA provides maximum thrust from the engines, but if the autopilot is still engaged, it could interfere with pilot commands, especially during these moments when precise control and responsiveness are crucial. While other options may sound plausible in different contexts or phases of flight, they're not the primary function of the TOGA switch when engaged on the ground. Reverse thrust would not be activated in this scenario as TOGA is intended for forward propulsion and control, not deceleration. Similarly, increasing drag or raising the landing gear are not outcomes associated with TOGA activation; these actions pertain to different flight operations. Overall, the disconnection of the autopilot allows pilots to manage the takeoff or go-around phase without the potential complications of an automated flight system, ensuring they have direct control.

6. _______ powers the DC SERV BUS.

A. The main battery

B. Both 1 and 2

C. The APU

D. The inverter

The DC SERV BUS in an aircraft is powered by both the main battery and the APU, which is why the selected answer encompasses both power sources. The main battery provides essential electrical power for the aircraft systems, particularly when the engines are not running. The Auxiliary Power Unit (APU) acts as a backup generator, providing electrical power when the engines are not operating, particularly during ground operations. In many aircraft electrical systems, the integration of these two power sources ensures redundancy and reliability. When the APU is running, it can supply power to the DC SERV BUS alongside the main battery. This design is critical for maintaining the aircraft's essential systems operational, especially when the aircraft is on the ground or during emergency situations. While the inverter converts DC power to AC, it is not directly responsible for powering the DC SERV BUS. Therefore, the best answer must reflect the roles of both the main battery and the APU in providing power, making the selection of both sources the most comprehensive and accurate choice.

7. At what cabin altitude do the passenger oxygen masks automatically deploy?

A. 10,000 feet

B. 12,000 feet

C. 14,000 feet

D. 16,000 feet

The correct answer is associated with the operational safety standards established for cabin pressurization in commercial aircraft. Passenger oxygen masks automatically deploy when the cabin altitude reaches 14,000 feet. This altitude threshold is set to ensure that passengers receive supplemental oxygen in scenarios where cabin pressure has lost integrity, as above this altitude, the lack of sufficient cabin pressure can lead to hypoxia, which is a dangerous condition due to insufficient oxygen levels. Understanding that 14,000 feet is a critical threshold helps illustrate the regulatory focus on passenger safety and physiological limits of the human body regarding oxygen availability. It is crucial for the aircraft systems to automatically respond at this altitude to protect passengers and crew if a depressurization event occurs. Other options represent altitudes where oxygen requirements may change, but do not trigger automatic deployment of masks. For instance, while 10,000 feet is notable as a point where pilots have to consider supplemental oxygen for themselves, it is below the critical threshold for passenger mask deployment. Similarly, the thresholds of 12,000 feet and 16,000 feet do not align with the established safety protocols found in aviation procedures for automatic mask deployment.

8. What percentage of thrust is produced by the ducted air around the engine?

A. 60%

B. 70%

C. 80%

D. 90%

The correct percentage of thrust produced by the ducted air around the engine is 80%. This value represents a significant aspect of the design of ducted engines, such as those found on the CRJ550. In a ducted fan engine, the airflow created by the fan not only contributes to thrust but is also more efficient due to the guided flow around the engine. This high percentage highlights the effectiveness of ducted engines in harnessing the air's kinetic energy, resulting in better fuel efficiency and performance compared to other engine types. The other percentages reflect less efficient designs or engines that do not utilize ducting to the same extent. In a typical high bypass ratio engine like the CRJ550's, the substantial thrust produced by the ducted air is critical for optimizing performance, maximizing thrust while minimizing fuel consumption, and enhancing overall operational efficiency.

9. What method is used to cool the flight deck avionics?

A. Aviation fans

B. Avionics exhaust fans

C. External fans

D. Thermal blankets

The method used to cool the flight deck avionics is through avionics exhaust fans. These fans are specifically designed to remove heat generated by the avionics systems during operation. The avionics in the flight deck often produce significant amounts of heat, which, if not properly managed, could lead to equipment failure or degradation of performance. The exhaust fans ensure that this heat is vented efficiently, maintaining optimal operating temperatures and contributing to the overall reliability and longevity of the avionics systems. The other options, while they might have roles in the broader context of aircraft cooling, do not specifically target the heat produced by flight deck avionics in the way that avionics exhaust fans do. Aviation fans and external fans may not provide the focused cooling needed directly for avionics, and thermal blankets are used for insulation rather than active cooling, making them unsuitable for the specific cooling needs of avionics components.

10. What is the maximum altitude for using APU bleed air?

A. 20,000 feet pressure altitude

B. 25,000 feet pressure altitude

C. 30,000 feet pressure altitude

D. 35,000 feet pressure altitude

The maximum altitude for using APU bleed air is 25,000 feet pressure altitude. This altitude limitation is established to ensure safe operation of the aircraft's environmental and pneumatic systems. At altitudes above this limit, the air density decreases, which can affect the efficiency and effectiveness of the APU's bleed air functions, potentially leading to insufficient performance and reliability in providing air for engine starts, cabin pressurization, air conditioning, and other systems that depend on bleed air. Understanding this altitude restriction is crucial for flight operations and adherence to safety protocols, as exceeding it could result in operational challenges or failure to meet system demands. The thresholds provided in the other options do not align with the technical parameters of the APU's operational capabilities, ensuring that 25,000 feet stands as the correct maximum altitude for safe and effective APU bleed air usage.

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!