

# Embraer Regional Jet (ERJ) Systems Practice Test (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

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- 1. Which navigation aids does the ERJ-145 primarily use?**
  - A. ADF and RNAV**
  - B. GPS and VHF**
  - C. ILS and VOR**
  - D. INS and DME**
  
- 2. Which situation interrupts the E-PBIT?**
  - A. Flight control movement**
  - B. All hydraulic pumps off**
  - C. AC power interruption**
  - D. Pitch control failure**
  
- 3. Describe the emergency exit configuration in the ERJ-145.**
  - A. It includes only forward exit doors**
  - B. It has several emergency exits, including over-wing exits and rear doors**
  - C. It consists of a single exit at the rear**
  - D. There are no emergency exits**
  
- 4. What indicates that the ERJ-145 cabin door is locked?**
  - A. Primary flight display**
  - B. Indicator light**
  - C. Flight control yoke**
  - D. Sonic alert**
  
- 5. What happens to the AC STBY BUS after the RAT deploys?**
  - A. It remains powered by the main batteries**
  - B. It connects to the AC ESS BUS**
  - C. It shuts down to save power**
  - D. It expands power to the other buses**
  
- 6. What helps maintain the hydraulic pressure in the ERJ hydraulic system?**
  - A. Electric pump**
  - B. Fluid reservoirs**
  - C. Engine compressors**
  - D. Air conditioning packs**

- 7. When is ADS Probe heat required on the ground?**
- A. OAT is above 10C**
  - B. OAT 0C and visible moisture**
  - C. Aircraft is airborne**
  - D. All of the above**
- 8. What condition allows for the activation of the automatic wheel braking system?**
- A. Touchdown only**
  - B. When spinning without gear**
  - C. Before the landing gear is retracted**
  - D. While in flight**
- 9. Which navigation equipment remains available during an electrical emergency?**
- A. Screen 1, NAV/COM2, IRS 2**
  - B. Screen 2, NAV/COM1, GPS 2**
  - C. CDU 1, FMS 1, IRS 2**
  - D. Screen 3, NAV/COM1, MCDU 1**
- 10. What is required for the ADS Probe heat in relation to engine operation?**
- A. Probes must be clean**
  - B. The engine must be off**
  - C. An engine must be running**
  - D. Both A and B**

## Answers

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

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## **Explanations**

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## 1. Which navigation aids does the ERJ-145 primarily use?

- A. ADF and RNAV
- B. GPS and VHF**
- C. ILS and VOR
- D. INS and DME

The ERJ-145 primarily relies on GPS and VHF for navigation. GPS (Global Positioning System) is a satellite-based navigation system that provides accurate position information, which is crucial for modern aviation. The use of GPS allows for precise navigation and is a standard component in many aircraft due to its reliability and accuracy in determining the aircraft's location. VHF (Very High Frequency) communication systems are essential for maintaining contact with air traffic control and other aircraft. They enable pilots to receive navigation information and updates regarding flight routes and weather conditions. The combination of GPS for navigation and VHF for communication makes these two systems foundational for the operation of the ERJ-145. Other options—ADF and RNAV, ILS and VOR, and INS and DME—represent different types of navigation aids that are less prominent or obsolete in modern aircraft like the ERJ-145, which focus on advanced satellite-based systems for their navigation needs.

## 2. Which situation interrupts the E-PBIT?

- A. Flight control movement
- B. All hydraulic pumps off
- C. AC power interruption**
- D. Pitch control failure

The situation that interrupts the E-PBIT (Electrical Power Built-In Test) is an AC power interruption. The E-PBIT is a critical self-diagnostic function that checks the electrical systems of the aircraft to ensure they are operating correctly. When there is an interruption in AC power, the system loses the necessary electrical supply to perform its tests and diagnostics. Consequently, this interruption halts the E-PBIT process, preventing it from completing its checks and potentially compromising the ability to assess the system's health. In contrast, the other situations listed do not directly cause an interruption of the E-PBIT. While flight control movement could momentarily affect some systems, it does not directly interrupt the testing process. The status of hydraulic pumps being off may influence the aircraft's systems, but it is not related to the functionality of the E-PBIT in the same manner as an AC power loss. Likewise, pitch control failure impacts flight dynamics but does not disrupt the E-PBIT operation. Thus, the critical link between AC power and the E-PBIT's ability to function successfully highlights why an AC power interruption is the correct answer.

- 3. Describe the emergency exit configuration in the ERJ-145.**
- A. It includes only forward exit doors**
  - B. It has several emergency exits, including over-wing exits and rear doors**
  - C. It consists of a single exit at the rear**
  - D. There are no emergency exits**

The emergency exit configuration in the ERJ-145 is designed to ensure passenger safety and efficient evacuation in case of an emergency. The inclusion of several emergency exits, such as over-wing exits and rear doors, allows for a facilitated escape for passengers. This design strategy is crucial for managing evacuations quickly and safely, enabling passengers to exit the aircraft from multiple points rather than having only a single exit. By having over-wing exits, the ERJ-145 leverages the wings' structure to provide additional escape routes that are easily accessible and help speed up the egress process. The rear exit further enhances the redundancy of escape options available, ensuring that regardless of the situation or blockage at one exit, passengers have alternative avenues to exit. This multi-faceted approach enhances overall safety, making option B the correct choice regarding the emergency exit configuration of the ERJ-145.

- 4. What indicates that the ERJ-145 cabin door is locked?**
- A. Primary flight display**
  - B. Indicator light**
  - C. Flight control yoke**
  - D. Sonic alert**

The correct choice is the indicator light, which provides a clear and immediate visual confirmation of the cabin door's status. In the ERJ-145, the door locking mechanism is designed to enhance safety during flight operations, and an illuminated indicator light specifically signals that the cabin door is securely locked. This is crucial for ensuring the safety of passengers and crew, preventing any accidental openings during critical phases of flight. While the primary flight display conveys various flight parameters and information to the pilot, it does not provide specific details regarding the locking status of the cabin door. The flight control yoke is primarily used for controlling the aircraft's flight path, and does not have any functionality related to the door locking mechanism. A sonic alert could potentially provide audio notifications for different system alerts, but in the case of the cabin door status, an indicator light is the most direct and effective means of conveying whether the door is locked or not.

**5. What happens to the AC STBY BUS after the RAT deploys?**

**A. It remains powered by the main batteries**

**B. It connects to the AC ESS BUS**

**C. It shuts down to save power**

**D. It expands power to the other buses**

The AC STBY BUS connects to the AC ESS BUS after the RAT (Ram Air Turbine) deploys. This connection is crucial for maintaining electrical power to essential systems during an emergency situation, particularly when the main power sources are lost. The RAT generates power to support the AC ESS BUS, which supplies crucial services necessary for the safe operation of the aircraft. This configuration ensures that important systems remain operational, allowing for continued functionality and safety in flight despite the loss of primary power sources. Maintaining power to the AC STBY BUS through this connection is vital since it allows the aircraft's backup systems to function properly, contributing to the overall reliability and safety of the aircraft's operations during critical situations.

**6. What helps maintain the hydraulic pressure in the ERJ hydraulic system?**

**A. Electric pump**

**B. Fluid reservoirs**

**C. Engine compressors**

**D. Air conditioning packs**

In the context of the ERJ hydraulic system, fluid reservoirs play a crucial role in maintaining hydraulic pressure. They serve as storage units for hydraulic fluid, ensuring that there is an adequate supply of fluid available to the hydraulic system. When the hydraulic system operates, fluid is pumped from these reservoirs to the various components that require hydraulic pressure, such as flight controls and landing gear systems. The reservoirs help mitigate pressure fluctuations and ensure that there is enough fluid to maintain consistent pressure within the system. They also allow for thermal expansion of the fluid, which helps to avoid pressure build-up that could lead to system failures. By providing a stable source of fluid, the reservoirs support the overall functionality and reliability of the hydraulic system, ensuring that it can respond effectively to the demands of the aircraft's operations.

**7. When is ADS Probe heat required on the ground?**

- A. OAT is above 10C
- B. OAT 0C and visible moisture**
- C. Aircraft is airborne
- D. All of the above

Probe heat for the Air Data System (ADS) is necessary on the ground when the outside air temperature (OAT) is at or below freezing (0°C or 32°F) and there is visible moisture present. This requirement is crucial because moisture can freeze on the probes, potentially leading to inaccurate airspeed, altitude, or vertical speed readings, which are critical for safe flight operations. Ensuring the probes are adequately heated prevents the formation of ice that can block the sensors, thereby maintaining their functionality while the aircraft is on the ground. When the OAT is above 10°C, the need for probe heat is typically not necessary, as ice formation is unlikely. Similarly, the requirement does not apply when the aircraft is airborne since the airflow and design of the aircraft helps prevent ice accumulation on the probes. Hence, the specific condition of having an OAT at or below 0°C with visible moisture triggers this precaution for safety and operational integrity.

**8. What condition allows for the activation of the automatic wheel braking system?**

- A. Touchdown only
- B. When spinning without gear
- C. Before the landing gear is retracted**
- D. While in flight

The automatic wheel braking system on the Embraer Regional Jet is designed to activate under specific conditions to ensure optimal safety and efficiency during operations. One of the primary conditions for activation is before the landing gear is retracted. This timing allows the system to ensure the aircraft is prepared for landing while also managing the braking functions effectively as soon as weight is applied to the wheels during touchdown. When the landing gear is extended and prior to retraction, the system can prepare to engage the brakes automatically as part of the overall operational procedures. This is crucial for controlling the aircraft and ensuring stability throughout the landing and takeoff phases. Touchdown activation primarily pertains to manual or secondary systems intervening rather than the automatic system initiating. The operation while spinning without gear and in flight does not align with the intended use of the automatic brake system, as these phases do not involve ground contact where braking would typically be applied. Thus, the focus on conditions prior to gear retraction aligns with the aircraft's operational design and safety protocols.

**9. Which navigation equipment remains available during an electrical emergency?**

- A. Screen 1, NAV/COM2, IRS 2
- B. Screen 2, NAV/COM1, GPS 2**
- C. CDU 1, FMS 1, IRS 2
- D. Screen 3, NAV/COM1, MCDU 1

The navigation equipment that remains available during an electrical emergency includes systems that are designed to operate with reduced electrical power or have backup systems in place. In the context of the Embraer Regional Jet (ERJ), typically, the primary navigation systems that remain operational during such emergencies are ones that are crucial for maintaining situational awareness and communication. In this case, the selected answer highlights components that are functional under emergency conditions. The presence of NAV/COM1 and GPS 2 in this configuration indicates readiness for both navigation and communication, which are vital in an emergency scenario. GPS 2 specifically is a robust navigation system that provides essential positional data even when other systems might be compromised. This configuration is tailored to ensure that the flight crew can continue to receive navigational information and maintain communication with air traffic control or other relevant entities, emphasizing the need for reliable equipment under critical circumstances.

**10. What is required for the ADS Probe heat in relation to engine operation?**

- A. Probes must be clean
- B. The engine must be off
- C. An engine must be running**
- D. Both A and B

For the ADS (Air Data System) Probe heat to function properly, it is essential that an engine is running. This ensures that the necessary bleed air is available to provide adequate heating for the probes. The heat generated helps prevent ice accumulation on the probes, which can easily disrupt accurate air data readings critical for safe aircraft operation. When the engine is operating, it generates bleed air, which can then be routed to the ADS probes to maintain their temperature. Ice on these probes can lead to erroneous readings of airspeed, altitude, and other crucial flight data, impacting overall flight safety and performance. While keeping the probes clean is important for optimal operation, as any obstruction can also lead to inaccurate data, the fundamental requirement for ensuring the heating functionality of the ADS probes directly ties back to having an engine running to supply the necessary heated air.

## 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](mailto:hello@examzify.com).**

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

**<https://erjsystems.examzify.com>**

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

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