Landing Gear and Brakes Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

Table of Contents

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. Describe the normal landing gear extension mode: What does the gear lever down do?

A. Releases hydraulic pressure for the uplocks and retraction actuators

B. Pumps hydraulic pressure

C. Locks uplocks closed

D. Opens the gear doors

2. The nosewheel steering system is _____ controlled _____, actuated steer-by-wire system.

A. Electronically, Hydraulically

B. Mechanically, Electrically

C. Electrically, Pneumatically

D. Hydraulically, Electrically

3. How do the landing gear doors actuate?

A. Mechanically, during landing gear extension or retraction

B. Electrically

C. Pneumatically

D. Hydraulically

4. Which hydraulic system controls the nosewheel steering?

A. Hydraulic System 1

B. Hydraulic System 2

C. Hydraulic System 3

D. Electrical System

5. What is the memory item for steering runaway?

A. STEER DISC SWITCH PRESS

B. ENGAGE AUTOPILOT

C. APPLY BRAKES

D. PULL YOKE TOWARD YOU

6. What does Locked Wheel protection provide?

A. Locks the faster wheel

B. If a wheel speed is 33% or below its associated paired wheel speed, BCM commands zero pressure to the brake of the slower wheel

C. Increases pressure to the slower wheel

D. Disengages ABS

7. Which conditions are required to cause the green towing light on the nose gear to illuminate?

A. Steering disengaged only

B. Parking brake not set only

C. Toe brakes not applied only

D. Steering disengaged, and parking brake not set or toe brakes not applied

8. How is the landing gear extended and retracted?

A. Electrically commanded and hydraulically activated

B. Mechanically operated

C. Electrically operated

D. Hydraulically activated

9. What is the maximum gear retraction speed (VLO)?

A. 250 KIAS

B. 220 KIAS

C. 270 KIAS

D. 235 KIAS

10. Setting the autobrake selector knob to OFF will do what?

A. Disarm the autobrake modes

B. Engage maximum braking automatically

C. Increase brake pressure to the wheels

D. Disable the parking brake

Answers

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

Explanations

1. Describe the normal landing gear extension mode: What does the gear lever down do?

A. Releases hydraulic pressure for the uplocks and retraction actuators

B. Pumps hydraulic pressure

C. Locks uplocks closed

D. Opens the gear doors

When the landing gear lever is placed in the down position, the system releases hydraulic pressure on the retract side—specifically the uplocks and the retraction actuators. This release frees the uplocks from their locked position and removes the upward force from the retract actuators, allowing the gear to move into the lowered, extended position under its own weight and the guidance of the doors and linkages. Once fully extended, the uplocks re-engage to lock the gear down. The doors opening is part of the sequence that accompanies extension, but the immediate, primary action of moving the lever down is to relieve pressure on the uplocks and retraction actuators so the gear can extend.

2. The nosewheel steering system is _____ controlled _____, actuated steer-by-wire system.

A. Electronically, Hydraulically

B. Mechanically, Electrically

C. Electrically, Pneumatically

D. Hydraulically, Electrically

Steer-by-wire nosewheel systems use electronic control of the steering input with hydraulic actuation. The pilot's tiller input is captured by sensors and processed by steering control electronics, which determine the commanded nosewheel angle. The actual turning is performed by hydraulic actuators that translate those electronic commands into motion. This setup allows precise, high-force steering without a mechanical linkage and enables features like speed-dependent limits and automatic centering. If it were mechanically controlled, there would be a direct linkage; if it were pneumatically actuated, the power source would be air rather than hydraulics; and if hydraulics controlled the system electronically, the control wouldn't be steer-by-wire as described.

3. How do the landing gear doors actuate?

A. Mechanically, during landing gear extension or retraction

B. Electrically

C. Pneumatically

D. Hydraulically

Mechanically linked to the gear, the doors open and close as the gear extends and retracts. A cam or linkage on the gear leg pushes the doors open to clear the wheel well during extension, and returns them to a closed, flush position as the gear retracts. This synchronization with the gear cycle ensures the doors provide necessary clearance and then streamline the bay for flight, without requiring a separate power source for door operation. Some systems may include dampers to control opening speed, but the actuation is ultimately driven by the gear's motion.

4. Which hydraulic system controls the nosewheel steering?

A. Hydraulic System 1

B. Hydraulic System 2

C. Hydraulic System 3

D. Electrical System

Nosewheel steering is driven by hydraulic power, not by electrical power. The pilot's input from the tiller or rudder pedals is processed to move a hydraulic actuator that turns the nose gear. In the typical three-hystem configuration used for several aircraft, the steering circuit is supplied by Hydraulic System 2. This separation keeps steering control independent from the other hydraulically powered systems and provides the necessary force and responsiveness for precise ground handling. The other hydraulic systems power different subsystems (such as main flight controls, landing gear mechanisms, or brakes), so they aren't used to control nosewheel steering. The electrical system isn't the source for this actuator, since hydraulics provide the required torque and reliability for steering the nose gear. So, the hydraulic system that controls nosewheel steering is System 2.

5. What is the memory item for steering runaway?

A. STEER DISC SWITCH PRESS

B. ENGAGE AUTOPILOT

C. APPLY BRAKES

D. PULL YOKE TOWARD YOU

When steering input goes runaway, the fastest way to regain control is to remove the steering input at its source. Pressing the steering-disconnect switch isolates the nose-wheel steering from the cockpit controls, instantly stopping the uncontrolled turn of the nose wheel. This memory item is designed to be performed immediately so you don't fight a perpetual steering input that could lead to tire damage or a loss of directional control. Once the steering input is disconnected, you can manage the airplane with braking and other available controls to maintain control and taxi or continue flight safely. Engaging autopilot wouldn't fix a mechanical steering runaway and could complicate control. Applying brakes helps manage speed but doesn't address the root cause of the runaway. Pulling the yoke toward you would just amplify the steering input and potentially worsen the situation.

6. What does Locked Wheel protection provide?

A. Locks the faster wheel

B. If a wheel speed is 33% or below its associated paired wheel speed, BCM commands zero pressure to the brake of the slower wheel

C. Increases pressure to the slower wheel

D. Disengages ABS

Locked Wheel protection continuously watches wheel speeds and uses that information to keep wheels turning rather than letting one lock up. It compares the speed of each wheel with its paired wheel on the same axle. When the slower wheel drops to 33% or less of the faster wheel's speed, the system steps in and releases brake pressure to the slower wheel—sending zero pressure in this scenario—to prevent a lock and restore rotation. This keeps the vehicle controllable and helps maintain steering during heavy braking. Other options don't fit because this feature does not lock or increase pressure on the faster or slower wheel, and it does not disengage ABS.

7. Which conditions are required to cause the green towing light on the nose gear to illuminate?

A. Steering disengaged only

B. Parking brake not set only

C. Toe brakes not applied only

D. Steering disengaged, and parking brake not set or toe brakes not applied

The green towing light signals that the aircraft is safe to tow on the ground. For it to illuminate, the nose gear steering must be disengaged so the tow tractor can guide the nose wheel without conflict with active steering, and the braking system must not be engaged—meaning the parking brake is released and toe brakes are not applied—so there's no brake drag or locked wheels during towing. If steering is still engaged, or a brake is applied (parking brake set or toe brakes pressed), towing isn't safe, and the light won't come on. That's why the best answer combines steering disengagement with the brakes not being engaged.

8. How is the landing gear extended and retracted?

A. Electrically commanded and hydraulically activated

B. Mechanically operated

C. Electrically operated

D. Hydraulically activated

Landing gear is moved by an electrically commanded hydraulic system. Your cockpit input signals a hydraulic control that directs pressurized fluid to the gear actuators. The hydraulic power actually moves the gear legs in and out, while the electrical signal handles the command and coordination, including locking mechanisms that hold the gear securely in the extended or retracted position. This combination gives the high force needed to overcome the weight and resistance of the gear and doors, with precise control and reliable locking during flight. Purely mechanical or purely electrical schemes don't provide the same balance of strong actuation and controllable, redundant operation, which is why the electrically commanded hydraulic setup is the standard.

9. What is the maximum gear retraction speed (VLO)?

A. 250 KIAS

B. 220 KIAS

C. 270 KIAS

D. 235 KIAS

VLO is the speed at which the landing gear can be safely retracted. This limit is set by the gear's mechanical and hydraulic design, including the doors and actuators, to ensure the gear fully stows without risking damage from aerodynamic loads or door interference. In many aircraft, that retraction limit is 250 KIAS. Staying below this speed guarantees the gear can complete the retraction cycle reliably and with the doors fully closed. Exceeding VLO can lead to incomplete retraction or gear/door damage, so pilots are trained to extend or retract gear only up to this speed or below. The other numbers represent either different limits for other conditions (like gear extended) or model-specific values, but 250 KIAS is the typical retraction limit.

10. Setting the autobrake selector knob to OFF will do what?

A. Disarm the autobrake modes

B. Engage maximum braking automatically

C. Increase brake pressure to the wheels

D. Disable the parking brake

The autobrake system is designed to apply a preselected, automatic braking force on landing or during a rejected takeoff. Setting the selector to OFF disables that automatic function, disarming all autobrake modes so no automatic brake application will occur. You then rely on manual braking input from the pilots. This does not cause automatic maximum braking to occur, and it does not by itself increase brake pressure—the system simply stops executing the preset automatic deceleration. The parking brake is a separate system and remains unaffected by turning autobrake off.

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://landinggearbrakes.examzify.com

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