

Instrument Flying Handbook 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. If you are operating on top of a cloud layer, you are typically in which weather condition?**
 - A. Visual Meteorological Conditions**
 - B. Instrument Meteorological Conditions**
 - C. Severe Weather**
 - D. Clear Air Turbulence**

- 2. If RAIM is degraded but GPS is still functional, what is the recommended action?**
 - A. Ignore and proceed with GPS**
 - B. Continue with GPS and try to regain RAIM**
 - C. Use alternate navigation methods and continue to monitor GPS**
 - D. Fly visually without reference**

- 3. What is the mnemonic for compass turns in the northern hemisphere?**
 - A. Unos**
 - B. Undershoot North, Overshoot South**
 - C. North overshoot**
 - D. Overshoot**

- 4. How many levels of flight are there between FL290 and FL410? (non DRVSM)**
 - A. 5**
 - B. 6**
 - C. 7**
 - D. 8**

- 5. How old can ARTCC weather data be?**
 - A. Up to 1 min**
 - B. Up to 15 mins**
 - C. Up to 30 mins**
 - D. Up to 6 mins**

- 6. When flying into lower temperature, the true altitude is relative to the altimeter: higher or lower?**
- A. Higher**
 - B. Lower**
 - C. Same**
 - D. Cannot determine**
- 7. What kind of turns should be made when on a no gyro/radar approach before the final approach?**
- A. Unbanked turns**
 - B. Wide, high banked turns**
 - C. Standard rate**
 - D. Diminished rate turns**
- 8. How many satellites does a typical GPS receiver need to determine integrity using RAIM, assuming baro aiding?**
- A. Four satellites**
 - B. Five satellites**
 - C. Six satellites**
 - D. Seven satellites**
- 9. Which departure procedure can be flown without ATC clearance (unless otherwise noted)?**
- A. ODP**
 - B. SID**
 - C. STAR**
 - D. Radar vectors**
- 10. As airspeed decreases, which elevator input is needed?**
- A. More forward elevator pressure**
 - B. No immediate change**
 - C. More left elevator**
 - D. More back elevator pressure**

Answers

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

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Explanations

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1. If you are operating on top of a cloud layer, you are typically in which weather condition?

- A. Visual Meteorological Conditions**
- B. Instrument Meteorological Conditions**
- C. Severe Weather**
- D. Clear Air Turbulence**

Visual Meteorological Conditions: when you're above the cloud deck, you typically have a clear view of the horizon and the terrain, allowing you to fly by visual reference. VMC means the weather is suitable for maintaining flight visibility and cloud clearance so you're not forced to rely on instruments. That's why being on top of a cloud layer is consistent with VMC. The other options don't fit as the defined flight conditions: IMC would apply if you couldn't maintain visual reference and had to rely on instruments due to clouds filling the sky; Severe Weather refers to hazardous phenomena like strong convective activity, which isn't implied by just being above a cloud layer; Clear Air Turbulence is a turbulence phenomenon that can occur with or without visible weather and doesn't define the basic flight condition.

2. If RAIM is degraded but GPS is still functional, what is the recommended action?

- A. Ignore and proceed with GPS**
- B. Continue with GPS and try to regain RAIM**
- C. Use alternate navigation methods and continue to monitor GPS**
- D. Fly visually without reference**

When RAIM is degraded, you can still receive GPS data, but you can't rely on its position integrity for navigation or approaches. The proper action is to use alternate navigation methods (such as VOR, DME, localizer, or cross-checks) and continue to monitor the GPS status. This keeps you from over-relying on an potentially unreliable GPS while you maintain situational awareness and watch for any improvement in RAIM or further degradation. Ignoring the degraded RAIM and pressing on with GPS risks an undetected position error, and trying to "regain" RAIM by continuing flight isn't guaranteed. Flying visually without reference isn't appropriate for instrument conditions.

3. What is the mnemonic for compass turns in the northern hemisphere?

A. Unos

B. Undershoot North, Overshoot South

C. North overshoot

D. Overshoot

In the Northern Hemisphere, there's a magnetic compass turning error that shows up when you change headings during a turn. To help remember how it behaves, use the mnemonic UNOS: Undershoot North, Overshoot South. This means when you're turning toward a north heading, the compass tends to lag behind, so you reach the north heading a bit later than your actual aircraft heading—your indicated heading undershoots north. When you're turning toward a south heading, the compass tends to lead, so you pass the south heading a bit before the actual heading—your indicated heading overshoots south. This pattern is a hemispheric thing, tied to the way the magnetic field and the compass respond during turns.

4. How many levels of flight are there between FL290 and FL410? (non DRVSM)

A. 5

B. 6

C. 7

D. 8

In airspace where DRVSM is not in effect, vertical separation must be 2,000 feet. That means you use flight levels spaced by 2,000 feet, which corresponds to stepping the flight level number by 20 (since each flight level represents 1,000 feet). From FL290 to FL410, the levels you can use are FL290, FL310, FL330, FL350, FL370, FL390, and FL410. That makes seven levels in total. If you were counting only levels strictly between the endpoints, you'd have five, but with the endpoints included the total is seven.

5. How old can ARTCC weather data be?

A. Up to 1 min

B. Up to 15 mins

C. Up to 30 mins

D. Up to 6 mins

The key idea is how fresh ARTCC weather information must be to be trusted for en route decisions. Center weather data is considered current when it's no more than about six minutes old. This aligns with the typical radar data refresh cycle (NEXRAD) and the time it takes to process and transmit that information to ARTCC and pilots. Because weather can change rapidly, data older than six minutes may not reflect current conditions and could lead to unsafe routing or altitude choices. If you need more up-to-date information, you can ask ATC for the latest updates or use other timely weather sources available to you.

6. When flying into lower temperature, the true altitude is relative to the altimeter: higher or lower?

A. Higher

B. Lower

C. Same

D. Cannot determine

Cold air makes pressure surfaces sit closer to the ground, and the altimeter is calibrated for standard (ISA) conditions. When you move into air that's colder than standard, the pressure you sense at a given true height corresponds to a higher altitude on the standard scale. In other words, for the same pressure reading, you're actually lower than the indicated altitude. So the true altitude is lower than what the altimeter shows. This is why cold temperature can cause a higher indicated altitude than your actual height above the terrain, requiring appropriate corrections to maintain safe clearance.

7. What kind of turns should be made when on a no gyro/radar approach before the final approach?

A. Unbanked turns

B. Wide, high banked turns

C. Standard rate

D. Diminished rate turns

When flying a no-gyro/radar approach, you want a predictable, controlled turn rate to reliably maneuver onto and intercept the final approach course. A standard-rate turn, about 3 degrees per second, provides that stability. It gives you a known turning time (a 90-degree turn takes roughly 30 seconds, a full 180-degree course reversal takes about a minute) so you can time your bank and heading in a way that keeps you aligned with the approach path without overshooting or making abrupt, hard-to-control changes. Unbanked turns aren't practical for a turn at all, so they wouldn't get you onto the final approach path. Wide, high-banked turns create large and variable turn radii, making it easy to overshoot or diverge from the intended path. Diminished rate turns are slower than standard and would prolong the maneuver, increasing the chance of altitude or position errors before established on the final approach. Standard rate is the most reliable, predictable choice in this situation.

8. How many satellites does a typical GPS receiver need to determine integrity using RAIM, assuming baro aiding?

- A. Four satellites
- B. Five satellites**
- C. Six satellites
- D. Seven satellites

RAIM relies on having more measurements than unknowns so you can test for faults by comparing observed and computed ranges (residuals). Without any aiding, you solve for four GNSS unknowns—X, Y, Z, and receiver clock bias—so you need at least four measurements for a solution. But to detect a faulty satellite, you need an extra measurement beyond what's just enough to solve the equations, which means five satellites. If altitude is provided by barometric data, that constraint reduces the GNSS unknowns by one (you don't have to solve for Z). Now you're solving for X, Y, and the clock bias, three unknowns, with four GNSS measurements giving a solution. Yet detecting a fault still requires an extra measurement beyond the minimum, so you need five satellites in total to perform the RAIM integrity check with baro aiding.

9. Which departure procedure can be flown without ATC clearance (unless otherwise noted)?

- A. ODP**
- B. SID
- C. STAR
- D. Radar vectors

An obstacle departure procedure is designed to provide a safe path from the runway to the en route structure and can be flown without explicit ATC clearance, unless ATC assigns a different route or the procedure notes say otherwise. These procedures are published to help pilots depart safely without waiting for vectors, using a defined climb path that clears obstacles. In contrast, standard instrument departures, standard terminal arrival routes, and radar vectors all require ATC involvement—either a clearance to fly the SID/STAR or vectors directing you to the appropriate heading or path. So the one that can be flown without ATC clearance (unless noted) is the obstacle departure procedure.

10. As airspeed decreases, which elevator input is needed?

- A. More forward elevator pressure
- B. No immediate change
- C. More left elevator
- D. More back elevator pressure**

As airspeed drops, the dynamic pressure on the tail decreases, which makes the elevator less effective at producing a pitching moment. To maintain the same nose-up attitude or to keep from losing lift as you slow down, you need to apply more back elevator pressure. In short, slower speeds reduce elevator authority, so a larger nose-up input is required to achieve the same pitch tendency. Pushing forward would lower the nose and reduce lift, which isn't what you want when slowing down.

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://instrumentflyinghb.examzify.com>

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

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