T-1A JAYHAWK INSTRUMENT/ NAVIGATION PHASE (XPW) IT PRACTICE TEST (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.

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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!

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Questions

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1. What is the go-around pitch setting with one engine operating?

A. 10°

B. 12°

C. 15°

D. 17°

2. What indicates station passage at an NDB?

A. First swing through 180°

B. First swing through 90°

C. Signal strength increase

D. Range finding

3. Which instrument provides information on the aircraft's angle of attack?

A. Fuel Flow

B. VSI

C. AoA Indicator

D. Altimeter

4. What visual cues assist in transitioning from an approach to landing?

A. Traffic lights and runway colors

B. Runway markings and visual references

C. GPS signals and flight indicators

D. Weather conditions and altimeter readings

5. What action should the co-pilot take during a precision approach when reaching decision altitude?

A. Call "minimums"

B. Call "Continue"

C. Initiate a go-around

D. Lower landing gear

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6. During a ground check point for an instrument takeoff, the EHSI must be within how many degrees of a known reference point?

A. 3 degrees

B. 5 degrees

C. 7 degrees

D. 10 degrees

7. While arcing north on the 15 DME arc, what is your lead point to intercept the 310° radial outbound at 0.50 Mach?

A. 1 NM

B. 3 NM

C. 5 NM

D. 10 NM

8. What angle of bank is commonly used during steep turns?

A. 30°

B. 45°

C. 60°

D. 90°

9. In terms of navigation, what does DME stand for?

A. Distance Maintenance Element

B. Doppler Measurement Equipment

C. Distance Measuring Equipment

D. Distant Measurement Element

10. What is the appropriate term for the area between two navigation points in aviation terminology?

A. Detour

B. Route

C. Fix

D. Leg

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Answers

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

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Explanations

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1. What is the go-around pitch setting with one engine operating?

A. 10°

B. 12°

C. 15°

D. 17°

The correct go-around pitch setting with one engine operating is indeed 10 degrees. This setting is crucial for maintaining the appropriate climb attitude during a go-around procedure, especially in the event of an engine failure. When an aircraft is performing a go-around with reduced power from one engine, the pitch setting of 10 degrees provides a good balance between maintaining sufficient speed and controlling the aircraft's climb performance. This angle allows the aircraft to achieve and maintain a manageable airspeed while ensuring positive climb gradient, which is essential for safely transitioning from the approach to a climbing phase. Choosing a pitch angle that is too high can lead to an undesirable increase in drag and a potential loss of airspeed, mitigating the aircraft's performance capabilities. Conversely, a pitch angle that is too low may not provide enough lift for an effective climb, especially important when one engine is inoperative. Understanding this pitch setting is critical for pilots to execute effective go-arounds, particularly in situations with engine loss, thereby enhancing safety and ensuring adherence to training protocols and performance standards.

2. What indicates station passage at an NDB?

A. First swing through 180°

B. First swing through 90°

C. Signal strength increase

D. Range finding

When navigating with a Non-Directional Beacon (NDB), the indication of station passage is typically identified by the first swing of the aircraft's heading indicator through 90 degrees. This occurs as the aircraft passes almost directly over the NDB. The behavior of the aircraft's automatic direction finder (ADF) needle reflects changes in the bearing to the station as the aircraft approaches and subsequently moves away from it. As the aircraft enters the area of the NDB's signal, the ADF will show a specific bearing that represents the direction of the beacon relative to the aircraft's position. When the aircraft is at the closest point of approach—essentially passing directly over the NDB—the ADF needle will dramatically change direction, resulting in a swing of approximately 90 degrees. This shift is a reliable cue to the pilot that they have successfully passed the NDB. Understanding this concept is crucial because it helps pilots determine their exact position relative to navigational aids in the environment, facilitating better navigation and situational awareness. While the other potential indications are relevant in flight operations, such as signal strength or range finding, they do not directly correspond to the moment of station passage as clearly as the 90-degree swing does.

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3. Which instrument provides information on the aircraft's angle of attack?

A. Fuel Flow

B. VSI

C. AoA Indicator

D. Altimeter

The instrument that provides information on the aircraft's angle of attack is the Angle of Attack (AoA) Indicator. This instrument is specifically designed to measure the angle between the oncoming air or relative wind and a reference line on the aircraft, typically the wing. The AoA is crucial for flight safety, as it helps pilots determine how close the aircraft is to reaching the critical angle of attack, beyond which a stall may occur. In contrast, the other instruments listed have different functions. Fuel Flow measures the rate of fuel consumption, which is important for understanding fuel efficiency and operational range. The Vertical Speed Indicator (VSI) indicates whether the aircraft is climbing or descending and at what rate. The Altimeter measures the aircraft's altitude above sea level based on atmospheric pressure. While these instruments are vital for evaluating different aspects of flight, they do not provide specific information regarding the angle of attack. This makes the AoA Indicator the clear choice for understanding and managing aircraft performance relative to the airflow around the aircraft.

4. What visual cues assist in transitioning from an approach to landing?

A. Traffic lights and runway colors

B. Runway markings and visual references

C. GPS signals and flight indicators

D. Weather conditions and altimeter readings

The correct choice emphasizes the importance of runway markings and visual references in aiding pilots as they transition from an approach to landing. Runway markings, such as centerlines, thresholds, and aiming points, provide critical guidance for pilots, helping them align with the runway during descent and final approach. These markings are standardized, so pilots can rely on them for consistent performance across different airports. Additionally, visual references, including the surrounding terrain, lighting systems, and the runway itself, are essential for situational awareness and orientation during the landing phase. They help pilots confirm their approach path and ensure proper alignment with the runway. Together, these visual cues create a clear picture for pilots, enhancing safety and accuracy during one of the most critical phases of flight. Other options, while they may involve aspects of flight, do not directly contribute to the visual transition from approach to landing in the same manner as runway markings and references. For instance, traffic lights and runway colors may not be universally applicable or helpful, and GPS signals along with flight indicators serve more for navigation than for visual approach confirmation. Weather conditions and altimeter readings provide important information but do not serve as direct visual cues that assist in the landing process.

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5. What action should the co-pilot take during a precision approach when reaching decision altitude?

A. Call "minimums"

B. Call "Continue"

C. Initiate a go-around

D. Lower landing gear

During a precision approach when reaching decision altitude, the appropriate action for the co-pilot is to call "Continue." This call serves as an indication that the aircraft is in a position to proceed with landing, provided the required visual references or criteria are met. Precision approaches, like the Instrument Landing System (ILS), allow for a high level of accuracy to help pilots land under low visibility conditions. If the decision altitude is reached and the necessary visual cues are visible, the call to "Continue" confirms to the pilot that a landing can be safely executed. This action is critical in maintaining clear communication and situational awareness in the cockpit, ensuring that both pilots are aligned in their approach. Other actions listed, such as calling for a go-around or lowering the landing gear, are appropriate in different contexts. For instance, a go-around may be necessary if visual references are not established or safe landing conditions are not met; however, reaching decision altitude implies that those conditions are being assessed at that moment. Lowering the landing gear is a procedure that would typically be completed prior to the final approach phase, rather than a direct response to reaching decision altitude.

6. During a ground check point for an instrument takeoff, the EHSI must be within how many degrees of a known reference point?

A. 3 degrees

B. 5 degrees

C. 7 degrees

D. 10 degrees

The requirement for the EHSI (Electronic Horizontal Situation Indicator) to be within 5 degrees of a known reference point during a ground check for an instrument takeoff is grounded in the need for accuracy in navigational systems. The EHSI plays a crucial role in providing the pilot with essential flight information, including heading and navigational data. Ensuring that the EHSI aligns closely with a known reference point minimizes the risk of navigational errors during takeoff. Maintaining this 5-degree tolerance ensures that the aircraft's navigational readings are reliable, which is vital for safe instrument flying. Small discrepancies beyond this range could lead to significant navigation errors, especially when flying in reduced visibility or relying solely on instruments. Thus, this standard is in place to promote operational safety and enhance situational awareness for pilots during critical phases of flight, such as takeoff. The other options suggest wider tolerances, which could compromise accuracy and safety, emphasizing why the standard is set specifically at 5 degrees. This figure reflects an industry consensus on the balance between practical operational limits and the necessity for precision in aviation instrumentation.

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7. While arcing north on the 15 DME arc, what is your lead point to intercept the 310° radial outbound at 0.50 Mach?

A. 1 NM

B. 3 NM

C. 5 NM

D. 10 NM

When intercepting a radial while arcing around a distance measuring equipment (DME) arc, it is crucial to ensure a smooth transition from the arc to the desired radial. The lead point is the point at which you will begin your turn to intercept the radial, and it is influenced by factors such as your airspeed and the turn rate. At 0.50 Mach, the indicated airspeed is relatively high, which means that the aircraft's ground speed is also significant. A ground speed of approximately 300 knots at sea level translates to a quicker approach to the intended radial. The general rule of thumb for determining the lead point in nautical miles when performing a turn to intercept a radial is to consider the Mach speed and the accompanying distance from the radial. In this scenario, a lead of 3 nautical miles before the point of interception is appropriate, as it accounts for the transition time required to turn from the arc to the radial. This approach allows you to maintain proper airspeed while making a smooth and controlled transition, ultimately ensuring effective navigation. Choosing a 3 NM lead point also reflects practical experience and standard procedures used in aviation to create a buffer for the turn and mitigate over- or under-turning issues, ensuring you align correctly with

8. What angle of bank is commonly used during steep turns?

A. 30°

B. 45°

C. 60°

D. 90°

During steep turns, a bank angle of 45 degrees is commonly utilized. This angle strikes a balance between maintaining adequate lift and achieving a significant change in direction without compromising aircraft control. At 45 degrees of bank, the aircraft can make a tighter turn while still allowing the pilot to manage workload effectively and maintain control. When executing a steep turn at this angle, pilots need to be aware of the increased load factor and potential stall risk, therefore increased proficiency in managing the aircraft's speed and configurations is essential. There's a considerable difference in handling and performance when compared to shallower bank angles like 30 degrees or extreme ones like 60 or 90 degrees. 30 degrees of bank would not be considered steep and would provide a gentle turn without the necessary agility required for tight maneuvering. A 60-degree bank is also often associated with high-performance maneuvers, but it can lead to significantly increased G-forces and may require more skill to maintain control safely. A 90-degree bank, while theoretically possible, would be impractical and typically not executed due to the risk of losing lift and control. Thus, 45 degrees is the conventional choice for steep turns in aviation training.

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9. In terms of navigation, what does DME stand for?

A. Distance Maintenance Element

B. Doppler Measurement Equipment

C. Distance Measuring Equipment

D. Distant Measurement Element

The term DME stands for Distance Measuring Equipment, which is a crucial component in aviation navigation systems. It is used to determine the distance of an aircraft from a specific ground-based station, typically a VOR (VHF Omnidirectional Range) or an NDB (Non-Directional Beacon). The DME system works by sending a signal from the aircraft to the ground station and measuring the time it takes for the signal to bounce back. By calculating this time delay, the system can provide precise distance information to the pilot. Having accurate distance information is vital for flight planning, navigation, and approach procedures. DME is often used in conjunction with other navigation aids to enhance situational awareness and ensure safe and efficient flight operations. Understanding the function of DME helps pilots make informed decisions during various phases of flight, including initial approach and landing.

10. What is the appropriate term for the area between two navigation points in aviation terminology?

A. Detour

B. Route

C. Fix

D. Leg

The correct term for the area between two navigation points in aviation terminology is referred to as a "Leg." In aviation, each segment of a flight path between two defined navigation points is called a leg. This terminology is commonly used during flight planning and execution to describe the specific sections of the route. For instance, when a flight plan is created, it may involve multiple legs – each representing the distance and direction between waypoints. Understanding this concept is critical for pilots, as it helps in navigation management and maintaining situational awareness during flight. In contrast to "leg," other terms like "fix" typically refer to a specific geographical location or an identified point in space that can be used for navigation or to determine an aircraft's position, rather than denoting a segment between two points. A "route" describes a more extensive path that encompasses several legs, while "detour" usually refers to an alternative path taken due to unforeseen circumstances, such as weather or airspace restrictions. Thus, "leg" is the most precise term for defining the area specifically between two navigation points.

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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:

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

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