United Airlines Flight Simulator Technician Trade 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

1. In a skid, where does the slip-skid ball move and what does that indicate?

A. Ball moves toward the inside of the turn, indicating a slip.

B. Ball remains centered, indicating coordination.

C. Ball moves toward the outside of the turn, indicating a skid.

D. Ball moves randomly with no bearing on coordination.

2. What is aerodynamic lift?

A. The force perpendicular to the relative wind that enables the aircraft to rise, produced by pressure differences over the wing.

B. The forward force that moves the airplane.

C. The drag acting on the wings.

D. The friction between the fuselage and air.

3. An SCR latches on when gate is triggered and turns off when what occurs?

A. Gate signal is removed

B. Voltage is removed

C. Temperature rises above limit

D. Current falls below the holding current

4. Which describes the basic operation of a PNP transistor?

A. Current is injected into the Base to allow current from Emitter to Collector

B. Current flows from Collector to Emitter regardless of base

C. The base current controls a flow from Emitter to Base

D. All current is applied to the Emitter, and if current is allowed to flow out of the Base, then current can flow from Emitter to Collector

5. DME operates in which frequency range?

A. 108 to 118 MHz

B. 960 to 1215 MHz

C. 2.4 to 2.5 GHz

D. 30 to 300 MHz

6. Which sequence lists the four major atmospheric layers from the surface upward with their approximate altitude ranges?

A. Exosphere; Thermosphere; Mesosphere; Stratosphere

B. Troposphere 0–12 km; Stratosphere 12–50 km; Mesosphere 50–85 km; Thermosphere 85–600 km

C. Troposphere 0–12 km; Stratosphere 12–50 km; Mesosphere 50–85 km; Thermosphere 85–600 km

D. Thermosphere; Mesosphere; Stratosphere; Troposphere

7. In a hydraulic system, what is the purpose of an accumulator and its precharge?

A. To regulate flow rate through the system.

B. To store hydraulic energy and precharge sets the initial pressure in the accumulator.

C. To cool the hydraulic fluid during operation.

D. To filter contaminants from hydraulic fluid.

8. What is the standard atmospheric pressure in inches of mercury (in.Hg) at sea level?

A. 29.50

B. 30.20

C. 31.00

D. 29.92

9. Angle of attack is defined as... and what should it not do in flight?

A. The angle between the wing chord line and the oncoming relative wind; it directly affects lift; should not be increased beyond the critical angle to avoid stall.

B. The angle of bank of the airplane.

C. The pitch angle of the nose relative to the horizon.

D. The angle between fuselage and relative wind.

10. Which statement correctly compares IPv4 and IPv6 addressing?

A. IPv4 uses 32-bit addresses, IPv6 uses 128-bit addresses.

B. IPv4 uses 16-bit addresses; IPv6 uses 128-bit.

C. IPv4 addresses are decimal; IPv6 addresses are hexadecimal.

D. Both use 128-bit addresses.

Answers

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

Explanations

1. In a skid, where does the slip-skid ball move and what does that indicate?

A. Ball moves toward the inside of the turn, indicating a slip.

B. Ball remains centered, indicating coordination.

C. Ball moves toward the outside of the turn, indicating a skid.

D. Ball moves randomly with no bearing on coordination.

In a coordinated turn the ball sits centered, because the horizontal forces are balanced. In a skid, the turn rate is too great for the bank (or there's excess rudder), and the airplane yaws with enough lateral inertia that the ball slides toward the outside of the turn. So the ball moving to the outside indicates a skid. If the ball were toward the inside, that would indicate a slip, and a centered ball means the turn is coordinated. To fix a skid, reduce the uncoordinated yaw and bring the ball back to center with proper rudder and aileron input.

2. What is aerodynamic lift?

A. The force perpendicular to the relative wind that enables the aircraft to rise, produced by pressure differences over the wing.

B. The forward force that moves the airplane.

C. The drag acting on the wings.

D. The friction between the fuselage and air.

Lift is the force perpendicular to the relative wind that enables the aircraft to rise, produced by pressure differences over the wing. The wing's shape and angle of attack speed up air over the top surface, lowering its pressure, while air beneath the wing is pushed downward, increasing bottom pressure. The resulting pressure difference creates an upward force that counteracts gravity and keeps the airplane aloft. This lift acts largely vertical when the wings are level; when the aircraft banks, the lift vector tilts with the wings. The other forces—thrust, which pushes forward; drag, which resists motion along the path; and friction on the surface—are not lift.

3. An SCR latches on when gate is triggered and turns off when what occurs?

A. Gate signal is removed

B. Voltage is removed

C. Temperature rises above limit

D. Current falls below the holding current

The essential idea is that an SCR latches once it's triggered by the gate, because its internal structure provides positive feedback that keeps the current flowing even after the gate pulse is gone. It will stay in the conducting state as long as the current through it remains above a certain value called the holding current. To turn it off, you must reduce the current through the SCR below that holding current. Gate removal doesn't reliably turn it off because the device will continue to conduct until the current drops enough. Simply removing voltage isn't guaranteed to accomplish this unless the circuit reduces the current below the holding level. Temperature limits are a failure mode, not the normal off mechanism. So the off condition is achieved when the current falls below the holding current.

4. Which describes the basic operation of a PNP transistor?

A. Current is injected into the Base to allow current from Emitter to Collector

B. Current flows from Collector to Emitter regardless of base

C. The base current controls a flow from Emitter to Base

D. All current is applied to the Emitter, and if current is allowed to flow out of the Base, then current can flow from Emitter to Collector

In a PNP transistor, the emitter acts as the source of charge carriers. When the base-emitter junction is forward biased, carriers move from the emitter into the base, and a small base current controls a much larger current that flows from the emitter to the collector. The emitter current is effectively the source current, and the base current (allowed to flow) governs how much of that emitter current reaches the collector. That description matches the idea that all current is supplied by the emitter, and when the base current is allowed to flow, current can move from the emitter to the collector. The other statements don't align with how a PNP transistor conducts: the base current isn't what directly enables the main emitter-to-collector flow, and the conduction path isn't from collector to emitter regardless of base, nor is the main conduction described as emitter-to-base flow being the controlling path.

5. DME operates in which frequency range?

A. 108 to 118 MHz

B. 960 to 1215 MHz

C. 2.4 to 2.5 GHz

D. 30 to 300 MHz

DME operates in the UHF band around 960 to 1215 MHz. This range is allocated for DME so the system can time the exchange of interrogation and reply signals between the ground station and the aircraft transponder, giving accurate distance information. Using UHF provides good line-of-sight transmission over typical air-to-ground distances and enough channel density to support many simultaneous interrogations without excessive interference. It also keeps DME separate from VOR/LOC navigation, which use the VHF band (108–118 MHz), and from common wireless bands like 2.4–2.5 GHz.

6. Which sequence lists the four major atmospheric layers from the surface upward with their approximate altitude ranges?

A. Exosphere; Thermosphere; Mesosphere; Stratosphere

B. Troposphere 0–12 km; Stratosphere 12–50 km; Mesosphere 50–85 km; Thermosphere 85–600 km

C. Troposphere 0–12 km; Stratosphere 12–50 km; Mesosphere 50–85 km; Thermosphere 85–600 km

D. Thermosphere; Mesosphere; Stratosphere; Troposphere

Understanding how the atmosphere stacks up from the ground helps explain why this sequence fits. The four major layers, from lowest to highest, are the troposphere, stratosphere, mesosphere, and thermosphere. The troposphere extends from the surface to about 12 km and is where weather occurs; above it, the stratosphere reaches roughly 12 to 50 km and contains the ozone layer, with temperature generally increasing with height. Next is the mesosphere, about 50 to 85 km up, where temperatures fall with altitude and meteors burn up. Finally, the thermosphere spans roughly 85 to 600 km, where the air is extremely thin and temperatures rise with solar input. The option listing Troposphere 0–12 km; Stratosphere 12–50 km; Mesosphere 50–85 km; Thermosphere 85–600 km matches this order and these ranges, making it the correct choice. The exosphere sits above the thermosphere and is not part of this four-layer sequence.

7. In a hydraulic system, what is the purpose of an accumulator and its precharge?

A. To regulate flow rate through the system.

B. To store hydraulic energy and precharge sets the initial pressure in the accumulator.

C. To cool the hydraulic fluid during operation.

D. To filter contaminants from hydraulic fluid.

The essential idea here is that an accumulator stores hydraulic energy and uses a precharge to establish the baseline pressure on the gas side so energy can be stored and released as needed. An accumulator has a gas chamber (often nitrogen) separated from the hydraulic fluid by a bladder or piston. As system pressure rises, fluid compresses the gas, storing energy. When demand spikes or pressure drops, the stored energy is released, helping to maintain pressure, dampen shocks, and provide rapid flow to actuators. The precharge is the initial gas-side pressure set on the accumulator when it's empty; it establishes the baseline so the device can respond within the system's operating range. If the precharge isn't set correctly, the accumulator won't store or release energy effectively. That's why the statement about storing hydraulic energy and the precharge setting the initial pressure best captures the accumulator's purpose.

8. What is the standard atmospheric pressure in inches of mercury (in.Hg) at sea level?

A. 29.50

B. 30.20

C. 31.00

D. 29.92

Standard atmospheric pressure at sea level is 29.92 inches of mercury. This value is the reference used in aviation and meteorology to define the standard atmosphere, so instruments like the altimeter can be calibrated and provide consistent readings. It corresponds to about 1013.25 hPa. Values higher or lower than 29.92 inHg would indicate pressures above or below the standard, leading to different instrument indications if used as the reference. Using 29.92 inHg keeps altitude and weather readings aligned across flights and charts.

9. Angle of attack is defined as... and what should it not do in flight?

A. The angle between the wing chord line and the oncoming relative wind; it directly affects lift; should not be increased beyond the critical angle to avoid stall.

B. The angle of bank of the airplane.

C. The pitch angle of the nose relative to the horizon.

D. The angle between fuselage and relative wind.

Angle of attack is the angle between the wing's chord line and the oncoming relative wind. This angle determines how much lift the wing can produce: lift rises with increasing angle of attack up to the point of the critical angle, beyond which the airflow over the wing separates and a stall occurs, causing a sudden loss of lift. So in flight you should not let the angle of attack exceed the critical angle of attack. The other descriptions refer to different aircraft orientations: the angle of bank is the roll angle of the airplane, the pitch angle is the nose's attitude relative to the horizon, and the angle between the fuselage and the relative wind is not how angle of attack is defined, since AoA uses the wing's chord line as the reference.

10. Which statement correctly compares IPv4 and IPv6 addressing?

A. IPv4 uses 32-bit addresses, IPv6 uses 128-bit addresses.

B. IPv4 uses 16-bit addresses; IPv6 uses 128-bit.

C. IPv4 addresses are decimal; IPv6 addresses are hexadecimal.

D. Both use 128-bit addresses.

IPv4 and IPv6 differ most in the size of their addresses. An IPv4 address is 32 bits long, which is written as four decimal numbers separated by dots (for example, 192.168.0.1). An IPv6 address is 128 bits long, typically written as eight groups of four hexadecimal digits separated by colons (for example, 2001:0db8:85a3:0000:0000:8a2e:0370:7334). This exact difference—32-bit versus 128-bit—is what the statement is testing. So the correct comparison is that IPv4 uses 32-bit addresses and IPv6 uses 128-bit addresses. The other choices mix up the bit length (16-bit vs 32-bit) or the notation without reflecting the actual size difference, which is the fundamental point here.

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://unitedflightsimtech.examzify.com

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