FAA HELICOPTER FLYING HANDBOOK 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.

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. What instrument displays altitude in feet or meters by sensing atmospheric pressure?

A. Altimeter

B. Attitude Indicator

C. Air Density

D. Agonic Line

2. Which rotor component turns in a plane perpendicular to the main rotor and provides yaw control and anti-torque?

A. Tail Rotor

B. Main Rotor

C. Auxiliary Rotor

D. Rudder System

3. The turn coordinator in a helicopter is used to indicate:

A. Roll rate

B. Yaw rate

C. Pitch rate

D. Heading

4. Which term describes the mechanical change of rotor blade pitch at different azimuths to alter lift and drag during rotation?

A. Cyclic Feathering

B. Delta Hinge

C. Coning

D. Coriolis Effect

5. The movement about the longitudinal axis caused by cyclic input right or left causes the helicopter to tilt in that direction.

A. Aircraft Roll

B. Airfoil

C. Aircraft Pitch

D. Agonic Line

6. Which term describes an upward sweep of rotor blades caused by lift and centrifugal force?

A. Coriolis Effect

B. Coning

C. Deviation

D. Density Altitude

7. What term describes tilting the rotor disc to produce horizontal movement by adjusting cyclic pitch?

A. Cyclic Pitch Control

B. Cyclic Feathering

C. Delta Hinge

D. Density Altitude

8. Which phenomenon describes stall near the tip due to dissymmetry of lift?

A. Retreating Blade Stall

B. Advancing Blade Stall

C. Tip Stall

D. Induced Stall

9. The part of the hub assembly to which the rotor blades are attached is commonly known as what?

A. Blade Grip

B. Blade Root

C. Blade Span

D. Blade Tip

10. What term describes the blade located in the semicircular part of the rotor disk where the blade direction is opposite to the direction of flight?

A. Retreating Blade

B. Advancing Blade

C. Center Blade

D. Outboard Blade

Answers

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

Explanations

1. What instrument displays altitude in feet or meters by sensing atmospheric pressure?

A. Altimeter

B. Attitude Indicator

C. Air Density

D. Agonic Line

Altitude is shown by an altimeter, an instrument that senses atmospheric pressure through the static system and converts that pressure into a readout of height above a reference level. As air pressure decreases with altitude, sealed pressure chambers inside the altimeter move the instrument's hands or a digital display to indicate altitude in feet or meters. The pilot sets the local barometric pressure (QNH or QFE) so the readout matches the intended reference, letting you fly at the correct vertical position relative to sea level or a field. This is different from an Attitude Indicator, which simply shows the aircraft's orientation (pitch and bank); Air Density is not an instrument display of altitude, and the Agonic Line is a magnetic variation concept, not a tool for reading altitude.

2. Which rotor component turns in a plane perpendicular to the main rotor and provides yaw control and anti-torque?

A. Tail Rotor

B. Main Rotor

C. Auxiliary Rotor

D. Rudder System

The ability to control yaw and counter the main rotor's torque comes from a tail rotor mounted on the tail boom that spins in a plane perpendicular to the main rotor's plane. By adjusting the thrust of this tail rotor with the anti-torque pedals, the pilot can push the helicopter's tail left or right, causing the fuselage to rotate around its vertical axis. This anti-torque action is essential because the spinning main rotor tends to force the fuselage to rotate in the opposite direction. The tail rotor provides the necessary counter-torque and yaw control. The other options don't fit this role: the main rotor is the lift-producing rotor and doesn't primarily control yaw; an auxiliary rotor isn't the standard anti-torque device in a typical single-rotor helicopter; and a rudder system isn't used to provide primary anti-torque in this configuration.

3. The turn coordinator in a helicopter is used to indicate:

A. Roll rate

B. Yaw rate

C. Pitch rate

D. Heading

The main idea is that a turn coordinator shows how fast the helicopter is turning around the vertical axis—that is, the yaw rate. The gyro is mounted at a tilt so it responds to yaw and, to some extent, roll, but the information you rely on from this instrument is the rate at which your heading is changing as you turn left or right. It helps you judge how quickly you're changing direction and ensures you fly coordinated turns. It does not give you a direct reading of pitch rate or your current heading; those come from other instruments.

4. Which term describes the mechanical change of rotor blade pitch at different azimuths to alter lift and drag during rotation?

A. Cyclic Feathering

B. Delta Hinge

C. Coning

D. Coriolis Effect

The ability to control where and how much lift the rotor produces as each blade passes around the hub is essential for directing the helicopter. Changing the blade pitch differently at various azimuths—so one part of the rotor disc produces more lift while another produces less—tilts the rotor thrust and steers the aircraft. This cyclic variation of blade pitch is what's described by cyclic feathering. It directly describes altering pitch as the blade rotates to change lift and drag around the disk, enabling forward, backward, or lateral movement. Delta hinge refers to a mechanical hinge feature that affects flap or feather motion, not the deliberate, azimuth-dependent pitch change used for steering. Coning is the outward bowing of blades due to centrifugal forces at speed, not a control method. The Coriolis effect involves inertial forces in a rotating frame and is a secondary effect, not the primary mechanism used to vary lift and drag with azimuth.

5. The movement about the longitudinal axis caused by cyclic input right or left causes the helicopter to tilt in that direction.

A. Aircraft Roll

B. Airfoil

C. Aircraft Pitch

D. Agonic Line

Rolling about the longitudinal axis happens when you move the cyclic to the left or right. That lateral cyclic input tilts the rotor disk in the same direction, so the helicopter banks toward that side. As the rotor disk tilts, one side of lift increases while the other decreases, causing the fuselage to roll (bank) in the direction of the input. This is why the movement described is called roll. For context, pitch is a different motion—rotation about the lateral axis—caused by forward or backward cyclic to tilt the rotor disk nose-up or nose-down. The agonic line is unrelated here, as it's a magnetic-reference concept, and an airfoil is simply a lifting surface, not a motion about an axis.

6. Which term describes an upward sweep of rotor blades caused by lift and centrifugal force?

A. Coriolis Effect

B. Coning

C. Deviation

D. Density Altitude

Coning is the upward sweep of rotor blades caused by lift and centrifugal force as the rotor spins. When each blade generates lift, it tends to rise along the blade's span, and the centrifugal force acts outward on the blade mass, pulling the blade tips away from the hub. The combination makes the blades bend upward, so the tips ride higher than the roots and the whole rotor disk forms a cone shape. This effect increases with higher rotor speed or greater blade loading (more lift from collective). Other terms describe different ideas—Coriolis Effect is about motion deflection in a rotating frame, Deviation refers to path changes for the aircraft, and Density Altitude is about air density with altitude—none of these describe the blade's upward sweep due to lift and centrifugal force.

7. What term describes tilting the rotor disc to produce horizontal movement by adjusting cyclic pitch?

A. Cyclic Pitch Control

B. Cyclic Feathering

C. Delta Hinge

D. Density Altitude

Tilting the rotor disc to produce horizontal movement is accomplished with the cyclic pitch control. The cyclic changes the pitch of each rotor blade as it rotates, creating more lift on one side of the disc than the other. Thatunequal lift tilts the rotor plane in the desired direction. Pushing the cyclic forward increases lift at the front of the disk and reduces it at the rear, tilting the disc forward and producing a forward thrust component. Pulling back tilts the disc backward for reverse movement, while a sideways input tilts it left or right for lateral movement. The helicopter still needs to maintain vertical lift, so the collective is adjusted separately to hold altitude. This control differs from collective pitch, which changes the pitch of all blades equally to climb or descend, and from rotor-head terms like delta hinge or from environmental terms like density altitude.

8. Which phenomenon describes stall near the tip due to dissymmetry of lift?

A. Retreating Blade Stall

B. Advancing Blade Stall

C. Tip Stall

D. Induced Stall

Dissymmetry of lift in forward flight means the rotor does not produce equal lift on the two halves of the disk—the advancing blade tends to have more lift than the retreating blade. As forward speed increases, the retreating blade's relative wind is slower, and its angle of attack toward the tip can reach the critical point first. That combination makes the tip region of the retreating blade stall, which is the classic retreating blade stall scenario. The other terms don't describe this specific situation: stall on the advancing blade is different and not the typical tip-area effect caused by lift dissymmetry; tip stall without tying it to dissymmetry isn't the same phenomenon; induced stall isn't the rotor-specific term for this condition.

9. The part of the hub assembly to which the rotor blades are attached is commonly known as what?

A. Blade Grip

B. Blade Root

C. Blade Span

D. Blade Tip

In a helicopter rotor system, the blade grip is the part of the hub that clamps the blade and provides the mounting point for the blade to attach to the hub, transmitting loads and allowing pitch changes. The blade root is the end of the blade itself that fits into the grip, not the hub component. Blade span and blade tip refer to the blade's length and far end, not the attachment point on the hub. Because the question points to the hub component that actually holds and integrates the blade into the rotor system, the blade grip is the correct term.

10. What term describes the blade located in the semicircular part of the rotor disk where the blade direction is opposite to the direction of flight?

A. Retreating Blade

B. Advancing Blade

C. Center Blade

D. Outboard Blade

In forward flight, the rotor disk has one side where the blades are moving into the oncoming air and another side where the blades are moving with the air. The blade on the semicircular part that is moving opposite to the direction of flight is called the retreating blade. This blade encounters lower relative wind speed and tends to generate less lift than the opposite, advancing blade, which moves into the wind and creates more lift. This difference across the disk is why pilots must use cyclic pitch to balance lift and keep the rotor disk aligned. If not managed, the retreating blade can experience reduced lift and potential stall at high forward speeds, which is why the term retreating blade is the correct description.

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://faahelicopterflyinghb.examzify.com

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