



**SKILL TEST STANDARDS:  
FLIGHT INSTRUCTOR – HELICOPTER**

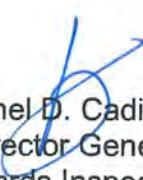
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**Foreword**

The Flight Instructor—Helicopter Skill Test Standards book has been published by the Civil Aviation Authority of the Philippines (CAAP) to establish the standards for the flight instructor certification skill tests for the Rotary category helicopter classes. CAAP inspectors and designated pilot examiners shall conduct skill tests in compliance with these standards. Flight instructors and applicants should find these standards helpful in skill test preparation.

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## SECTION 1 GENERAL

### 1.1 INTRODUCTION

#### *General Information*

The Flight Standards Service of the Civil Aviation Authority of the Philippines (CAAP) has developed this skill test as the standard to be used by examiners<sup>1</sup> when conducting flight instructor airplane skill tests. Instructors are expected to address all of the elements contained in this skill test standard (STS) when preparing applicants for skill tests. Applicants should be familiar with this STS and refer to these standards during their training.

The CAAP gratefully acknowledges the valuable assistance provided by many individuals, companies, and organizations throughout the aviation community who have contributed their time and talent in assisting with the revision of this skill test standard.

This STS is also available for download, in pdf format, from the CAAP web site, [www.caap.gov](http://www.caap.gov). This STS is published by the Civil Aviation Authority of the Philippines, Airman Testing Standards

#### *Skill Test Standards Concept*

Philippine Civil Air Regulation part 2 specifies the Areas of Operation in which knowledge and skill must be demonstrated by the applicant before the issuance of a flight instructor certificate with the associated category and class ratings. The Philippine Civil Air Regulations provides the flexibility that permits the CAAP to publish skill test standards containing the Areas of Operation and specific Tasks in which competency must be demonstrated. The CAAP will revise this book whenever it is determined that changes are needed in the interest of safety. **Adherence to the provisions of regulations and the skill test standards is mandatory for the evaluation of flight instructor applicants.**

### 1.2 PURPOSE

This Advisory Circular (AC) provides guidance to individuals, organizations and examiner regarding the determination that an individual's skill level is adequate for the issuance of a Flight Instructor Rating / License with the appropriate rating for—

- 1) Rotorcraft, (Helicopter)

### 1.3 STATUS OF THIS ADVISORY CIRCULAR

This is an original issuance of this AC.

### 1.4 BACKGROUND

- A. ICAO Standards in Annex 1, Personnel Licensing, require that, before issuing an Flight Instructor Rating /License, the State must assess the knowledge and skill of the individual to perform such operations.
- B. Part 2 of the Philippines Civil Aviation Regulations establishes the specific requirements Flight Instructor testing that parallel the ICAO Standards.
- C. This AC provides amplified standards for a FI applicant and the person assigned to conduct the skill test for license

## 1.5 APPLICABILITY

- A. These Skill Test Standards are for use by examiners for determination of an individual's fitness to be issued and continue to hold FI privileges.
- B. Flight instructors are expected to use these standards when preparing applicants for their FI skill tests.
- C. Applicants should be familiar with these skill test standards and refer to them during their training.

• Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.  
• Where a regulation contains the words "prescribed by the Authority," the AC may be considered to "prescribe" a viable method of compliance, but status of that "prescription" is always "guidance" (never regulation).

## 1.6 RELATED REGULATIONS

The following regulations are directly applicable to the guidance contained in this advisory circular—

- PCAR Part 2, Personnel Licensing
- PCAR Part 8, Operations of Aircraft

## 1.7 RELATED PUBLICATIONS

For further information on this topic, individuals, instructors and examiners are invited to consult the following publications—

- 1) Civil Aviation Authority of the Philippines (CAAP)
  - AC 02-009, Knowledge Testing
  - AC 02-006, STS Flight Testing

Copies may be obtained from the CAAP FSIS.
- 2) Manufacturer of the aircraft to be used for the skill test
  - Pilot Operating Handbook, or
  - Approved Flight Manual
- 3) United States Federal Aviation Administration (FAA)
  - AC 00-45, Aviation Weather
  - FAA-H-8083-9A Aviation Instructor Handbook of Aeronautical Knowledge
  - FAA-H-8083-21, Rotary Flying Handbook
  - FAA-H-8083-3, Airplane Flying Handbook
  - FAA-S-8081-9, Flight Instructor PTS Instrument
  - FAA-S-8081-7B, Flight Instructor PTS for Rotorcraft  
(CAAP has adopted FAA PTS)

- Copies are normally available through flight schools and instructors.
  - Contact the CAAP FSIS if unable to find copies.
- 4) International Civil Aviation Organization (ICAO)
  - Annex, 1, Personnel Licensing

Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.

## 1.8 DEFINITIONS & ACRONYMS

- A. The following definitions are used in this advisory circular—
  - 1) **Aircraft – category.** Classification of aircraft according to specified basic characteristics, e.g. Rotary, rotorcraft, glider, lighter-than-air, powered-lift.
  - 2) **Competency.** A combination of skills, knowledge and attitudes required to perform a to the prescribed standard.
  - 3) **Crew resource management.** A program designed to improve the safety of flight operations by optimizing the safe, efficient, and effective use of human resources, hardware, and information through improved crew communication and coordination.
  - 4) **Error.** An action or inaction by the flight crew that leads to deviations from organizational or flight crew intentions or expectations.
  - 5) **Error management.** The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired aircraft states.
  - 6) **Examiner.** A qualified person designated by CAAP to conduct a proficiency test, a skill test for an license or rating, or a knowledge test under the Philippine regulations.
  - 7) **Flight simulation training device.** Any one of the following three types of apparatus in which flight conditions are simulated on the ground—
    - A. A **flight simulator**, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated;
    - B. A **flight procedures trainer**, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;
    - C. A **basic instrument flight trainer**, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions
  - 8) **Flight test.** For the purpose of this advisory circular, a portion of a skill test that includes Tasks that are normally accomplished while operating the aircraft.
  - 9) **Practical Test.** For the purpose of this advisory circular, a portion of the skill test that includes Tasks accomplished before the flight portion.
  - 10) **Rating.** An authorization entered on or associated with a license and forming part thereof, stating special conditions, privileges or limitations pertaining to such license.
  - 11) **Scenario.** A plan of action that includes the provision for accomplishing each Task specified in the skill test standards in practical and logical manner.
  - 12) **Threat management.** The process of detecting and responding to threats with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired aircraft states.
  - 13) **Threat.** Events or errors that occur beyond the influence of the flight crew, increase operational complexity and must be managed to maintain the margin of safety.

B. The following acronyms are used in this advisory circular—

- 1) **AC** - Advisory Circular
- 2) **ADM** - Aeronautical Decision-Making
- 3) **AIP** - Aeronautical Information Publication
- 4) **AIRMETS** - Airman's Meteorological Information
- 5) **ATC** - Air Traffic Control
- 6) **CFIT** - Controlled Flight into Terrain
- 7) **CRM** - Crew Resource Management
- 8) **CAAP** - Civil Aviation Authority of the Philippines
- 9) **FAC** - Formal Application Checklist
- 10) **FSIS** - Flight Standards Inspectorate Service
- 11) **FI** - Flight Instructor
- 12) **GPO** - Government Printing Office
- 13) **GPS** - Global Positioning System
- 14) **LAHSO** - Land and Hold Short Operations
- 15) **MEL** - Minimum Equipment List
- 16) **NOTAM** - Notice to Airmen
- 17) **NWS** - National Weather Service
- 18) **PIREPS** - Pilot Weather Reports
- 19) **PCAR** - Philippine Civil Aviation Regulations
- 20) **PEL** - Personnel Licensing
- 21) **SIGMETS** - Significant Meteorological Information
- 22) **SRM** - Single Pilot Resource Management
- 23) **STS** - Skill Test Standards
- 24) **SUA** - Special Use Airspace
- 25) **TFR(s)** - Temporary Flight Restriction(s)

## SECTION 2 INTRODUCTORY INFORMATION

### 2.1 FLIGHT INSTRUCTOR – ROTARY SKILL TEST PREREQUISITES

An applicant for the Flight Instructor –Rotary Skill Test is required to—

- 1) Be at least 18 years of age;
- 2) Be able to read, speak, write, speak and understand the aviation
- 3) English at at least Level 4 (Operational);
- 4) Have passed the appropriate flight instructor knowledge test since the beginning of the 24th month before the month in which he or she takes the skill test;
- 5) Have satisfactorily accomplished the required training and obtained the aeronautical experience prescribed;
- 6) Possess at least a current Class 1 medical certificate;
- 7) Have an endorsement from an authorized instructor certifying that the applicant—
  - (a) Has received and logged training time within 60 days preceding the date of application in preparation for the skill test, and
  - (b) Is prepared for the skill test; and
- 8) Also have an endorsement certifying that the applicant has demonstrated satisfactory knowledge of the subject areas in which the applicant was deficient on the airman knowledge test.

### 2.2 SKILL STANDARDS SPECIFIED BY REGULATION

The determination of an applicant's ability to hold a license or rating is based on a demonstration of the ability to perform as pilot-in command to perform the procedures and maneuvers to the degree of competency appropriate to the privileges granted and to—

- 1) able to make a practical application of the fundamentals of instructing;
- 2) competent to teach the subject matter, procedures, and maneuvers included in the standards to students with varying backgrounds and levels of experience and ability;
- 3) able to perform the procedures and maneuvers included in the standards to at least the Commercial Pilot skill level, while giving effective flight instruction; and
- 4) competent to pass the required practical test for the issuance of the flight instructor certificate with the associated category and class ratings or the addition of a category and/or class rating to a flight instructor certificate.

#### *Examiner Responsibility*

The examiner who conducts the skill test is responsible for determining that the applicant meets acceptable standards of teaching ability, knowledge, and skill in the selected Tasks. The examiner makes this determination by accomplishing an Objective that is appropriate to each selected Task, and includes an evaluation of the applicant's:

- 1) ability to apply the fundamentals of instructing;
- 2) knowledge of, and ability to teach, the subject matter, procedures, and maneuvers covered in the Tasks;
- 3) ability to perform the procedures and maneuvers included in the standards to at least the Commercial Pilot skill level while giving effective flight instruction; and
- 4) ability to analyze and correct common errors related to the procedures and maneuvers covered in the Tasks.

It is intended that oral questioning be used at any time during the practical test to determine that the applicant can instruct effectively and has a comprehensive knowledge of the Tasks and their related safety factors.

During the flight portion of the practical test, the examiner shall act as a student during selected maneuvers. This will give the examiner an opportunity to evaluate the flight instructor applicant's ability to analyze and correct simulated common errors related to these maneuvers.

## 2.3 SKILL TEST STANDARDS FORMAT

A. **Areas Of Operation** are phases of the skill test arranged in a logical sequence within each standard.

- They begin with Preflight Preparation and end with Post flight Procedures.
- The examiner, however, may conduct the operational portions of the skill test in any sequence that will result in a complete and efficient test.
- However the ground portion of the skill test shall be accomplished before the flight portion.

B. **Tasks** are titles of knowledge areas, flight procedures, or maneuvers appropriate to an Area Of Operation.

C. **Applicable to:** The abbreviation(s) immediately following a TASK refer to the category and/or class aircraft appropriate to that TASK. The meaning of each abbreviation is as follows.

- RG - Rotary (Helicopter and Gyroplane)

D. The **Objective** lists the elements that must be satisfactorily performed to demonstrate competency in a TASK. The Objective includes—

### 1) Fundamentals of Instructing

*Note: The examiner shall select at least tasks E and F.  
Reference: FAA-H-8083-9.*

#### *Task A: The Learning Process*

**Objective:** To determine that the applicant exhibits instructional knowledge of the learning process by describing:

- 1) The definition and characteristics of learning.
- 2) Practical application of the laws of learning.
- 3) Factors involved in how people learn.
- 4) Recognition and proper use of the various levels of learning.
- 5) Principles that are applied in learning a skill.
- 6) Factors related to forgetting and retention.
- 7) How the transfer of learning affects the learning process.
- 8) How the formation of habit patterns affects the learning process.

#### *Task B: Human Behavior*

**Objective:** To determine that the applicant exhibits instructional knowledge of human behavior and effective communication and how these impact effective learning by describing:

- 1) Control of human behavior.
- 2) Development of student potential.
- 3) Relationship of human needs to behavior and learning.

- 4) Relationship of defense mechanisms to student learning and pilot decision making.
- 5) General rules which a flight instructor should follow during student training to ensure good human relations

#### ***Task C: The Teaching Process***

**Objective:** To determine that the applicant exhibits instructional knowledge of the teaching process by describing:

- 1) Preparation of a lesson for a ground or flight instructional period.
- 2) Presentation of knowledge and skills, including the methods, which are suitable in particular situations.
- 3) Application, by the student, of the knowledge and skills presented by the instructor.
- 4) Review of the material presented and the evaluation of student performance and accomplishment.

#### ***Task D: Teaching Methods***

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements of teaching methods by describing:

- 1) Preparation of a lesson.
- 2) Organization of material.
- 3) Training delivery methods:
  - a) Lecture method.
  - b) Guided discussion method.
  - c) Computer-assisted learning method.
  - d) Demonstration-performance method.
  - e) Drill and practice method.
- 4) Problem based learning.
- 5) Instruction aids and training technologies.
- 6) The guided discussion method.
- 7) The demonstration-performance method.

#### ***Task E: Critique and Evaluation***

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements of critique and evaluation by describing:

- 1) Purpose and characteristics of an effective critique.
  - 2) Difference between critique and evaluation.
  - 3) Characteristics of effective oral questions and what type to avoid.
  - 4) Responses to student questions.
  - 5) Characteristics and development of effective written tests.
  - 6) Characteristics and uses of performance tests, specifically, the CAAP skill test standards.
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**Task F: Flight Instructor Characteristics and Responsibilities**

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements of flight instructor characteristics and responsibilities by describing:

- 1) Major characteristics and qualifications of a professional flight instructor.
- 2) Role of the flight instructor in dealing with student stress, anxiety, and psychological abnormalities.
- 3) Flight instructor's responsibility with regard to student pilot supervision and surveillance.
- 4) Flight instructor's authority and responsibility for endorsements and recommendations.
- 5) Flight instructor's responsibility in the conduct of the required CAAP flight review.

**Task G: Planning Instructional Activity**

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to the planning of instructional activity by describing:

- 1) Development of a course of training.
- 2) Content and use of a training syllabus.
- 3) Purpose, characteristics, proper use, and items of a lesson plan.
- 4) Flexibility features of a course of training, syllabus, and lesson plan required to accommodate students with varying backgrounds, levels of experience, and ability.

**Task H: Risk Management**

**Objective:** To determine that the applicant exhibits instructional knowledge of risk management by describing:

- 1) Principles of risk management.
- 2) Risk management process.
- 3) Level of risk.
- 4) Assessing risk.
- 5) Mitigating risk.
- 6) IMSAFE checklist.
- 7) PAVE checklist.
- 8) 5P checklist.

*Note: If this task has been previously performed in the aircraft during an earlier instructor rating, the determination of the required knowledge can be demonstrated during the brief, at the discretion of the examiner.*  
*References :PCAR 3-Procedures Manual, PCAR 8, AIP; FAA-H-8083-21, FAA-H-8083-3, FAA-H-8083-25.*

**2) Technical Subject Areas**

*Note: The examiner must select at least one Tasks.*

**Task A: Aeromedical Factors**

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to aeromedical factors by describing:

- 1) How to obtain an appropriate medical certificate.
- 2) How to obtain a medical certificate in the event of a possible medical deficiency.
- 3) The causes, symptoms, effects, and corrective action of the following medical factors:
  - a) Hypoxia
  - b) Hyperventilation

- c) Middle ear and sinus problems
  - d) Spatial disorientation
  - e) Motion sickness
  - f) Carbon monoxide poisoning
  - g) Fatigue and stress
  - h) Dehydration
- 4) The effects of alcohol and drugs, and their relationship to flight safety.
  - 5) The effect of nitrogen excesses incurred during scuba dives and how this affects pilots and passengers during flight.

References: PART 8.8.1.13; AIP; FAA-H-8083-3, FAA-H-8083-25.

#### **Task B: Visual Scanning and Collision Avoidance**

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements of visual scanning and collision avoidance by describing:

- 1) Relationship between a pilot's physical condition and vision.
- 2) Environmental conditions that degrade vision.
- 3) Vestibular and visual illusions.
- 4) "See and avoid" concept.
- 5) Proper visual scanning procedure.
- 6) Relationship between poor visual scanning habits and increased collision risk.
- 7) Proper clearing procedures.
- 8) Importance of knowing aircraft blind spots.
- 9) Relationship between aircraft speed differential and collision risk.
- 10) Situations that involve the greatest collision risk.
- 11) Practice of "time sharing" of attention inside and outside the cockpit.

References: FAA-H-8083-9.

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to use of distractions during flight training by describing:

- 1) Flight situations where pilot distraction can be a causal factor related to aircraft accidents.
- 2) Selection of realistic distractions for specific flight situations.
- 3) Relationship between division of attention and flight instructor use of distractions.
- 4) Difference between proper use of distractions and harassment.

#### **Task D: Principles of Flight**

References: FAA-H-8083-21.

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to principles of flight by describing:

- 1) Characteristics of different rotor systems.
  - 2) Effect of lift, weight, thrust, and drag during various flight maneuvers.
  - 3) Retreating blade stall.
  - 4) Torque effect.
  - 5) Dissymmetry of lift.
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- 6) Blade flapping and coning.
- 7) Coriolis effect.
- 8) Translating tendency.
- 9) Translational lift.
- 10) Transverse flow effect.
- 11) Pendular action.

**Task E: Helicopter Flight Controls**

References: FAA-H-8083-21.

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to flight controls of the helicopter used for the practical test by describing:

- 1) Collective pitch control.
- 2) Cyclic pitch control.
- 3) Anti-torque control.
- 4) Throttle control.

References: FAA-H-8083-21, FAA-H-8083-1

**Task F: Helicopter Weight and Balance**

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to weight and balance by describing:

- 1) Weight and balance terms.
- 2) Effect of weight and balance on performance.
- 3) Determination of total weight, center of gravity (longitudinal and lateral), and changes that occur when adding, removing, or shifting weight.

**Task G: Navigation and Flight Planning**

References: FAA-H-8083-25

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to navigation and flight planning by describing:

- 1) Terms used in navigation.
  - 2) Features of aeronautical charts.
  - 3) Importance of using proper and current aeronautical charts.
  - 4) Identification of various types of airspace.
  - 5) Method of plotting a course, selection of fuel stops and alternates, and appropriate actions in the event of unforeseen situations.
  - 6) Fundamentals of pilotage and dead reckoning.
  - 7) Fundamentals of radio navigation.
  - 8) Diversion to an alternate.
  - 9) Lost procedures.
  - 10) Computation of fuel requirement.
  - 11) Importance of preparing and properly using a flight log.
  - 12) Importance of a weather check and the use of good judgment in making a "go/no-go" decision.
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13) Purpose of, and procedure used in, filing a flight plan.

14) Global positioning system (GPS).

*References: AIP; FAA-H-8083-21, FAA-H-8083-25, PCAR 2 and 8.*

#### ***Task H: Night Operations***

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to night operations by describing:

- 1) Factors related to night vision, disorientation, and optical illusions.
- 2) Weather considerations specific to night operations.
- 3) Preflight inspection, including windshield and window cleanliness.
- 4) Proper adjustment of interior lights, including availability of flashlight.
- 5) Use of position and anti-collision lights prior to, during, and after engine start.
- 6) Hover taxiing and orientation on an airport or heliport.
- 7) Takeoff and climb-out.
- 8) Inflight orientation.
- 9) Importance of verifying the helicopter's attitude by visual references and flight instruments.
- 10) Recovery from critical flight attitudes by visual references and flight instruments.
- 11) Emergencies such as electrical failure, engine malfunction, and emergency landings.
- 12) Traffic patterns.
- 13) Approaches and landings with and without landing lights

*References: PCAR 1, 2, 8, 13; AC's, AIP, FAA-H-8083-25, POH/AFM, Rotorcraft flight Manual*

#### ***Task I: PCARs and Publications***

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to the Code of Philippine Civil Air Regulations and related publications by describing:

- 1) Availability and method of revision of PCAR parts 1, 2, 8, and 13 by describing:
  - a) Purpose
  - b) general content
- 2) Availability of flight information publications, advisory circulars, practical test standards, pilot operating handbooks, and approved airplane flight manuals by describing:
  - a) Availability.
  - b) Purpose.
  - c) General content.

*References: AIP, PART 8; FAA-H-8083-3, FAA-H-8083-15, FAA-S-8081-12, FAA-S-8081-14; FAA-S-ACS-6.*

#### ***Task J: National Airspace System***

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements of the national airspace system by describing:

- 1) Basic VFR Weather Minimums for all classes of airspace.
- 2) Airspace classes—the operating rules, pilot certification, and airplane equipment requirements for the following:

- a) Class A.
  - b) Class B.
  - c) Class C.
  - d) Class D.
  - e) Class E.
  - f) Class G.
- 2) Special use airspace (SUA).
  - 3) Temporary flight restrictions (TFR).

**Task K: Navigation Systems and Radar Services**

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to navigation systems and radar service by describing:

- 1) One ground-based navigational system (VOR/VORTAC, NDB, and DME).
- 2) Satellite-based navigation system.
- 3) Radar service and procedures.
- 4) Global positioning system (GPS).

## 2.4 SPECIAL EMPHASIS AREAS

References: AIP, PART 8; FAA-H-8083-3, FAA-H-8083-15, FAA-S-8081-12.

Examiners shall also place special emphasis upon areas of aircraft operations considered critical to flight safety. Among these are—

- 1) Positive aircraft control.
- 2) Positive exchange of the flight controls procedure.
- 3) Airport operations/runway incursions;
- 4) Collision avoidance.
- 5) Wake turbulence avoidance.
- 6) LAHSO.
- 7) Runway incursion avoidance.
- 8) CFIT.
- 9) ADM and risk management.
- 10) Wire strike avoidance.
- 11) Checklist usage.
- 12) Temporary flight restrictions (TFRs).
- 13) Special use airspace (SUA).
- 14) Aviation security.
- 15) Single-Pilot Resource Management (SRM).
- 16) Other areas deemed appropriate to any phase of the practical test.

- Although these areas may not be specifically addressed under each TASK, they are essential to flight safety.
- Each will be evaluated during the skill test.
- In all instances, the applicant's actions will relate to the complete situation.

With the exception of SRM and the runway incursion avoidance, a given special emphasis area may not be specifically addressed under a given Task. All areas are essential to flight safety and will be evaluated during the practical test.

## SECTION 3 AREA OF OPERATION: PREFLIGHT PREPARATION

### 3.1 TASK: LOGBOOK ENTRIES AND CERTIFICATE ENDORSEMENTS

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to logbook entries and certificate endorsements by describing:

- 1) Required logbook entries for instruction given.
- 2) Required student pilot certificate endorsements, including appropriate logbook entries.

- 3) Preparation of a recommendation for a pilot practical test, including appropriate logbook entry for:
  - a) initial pilot certification.
  - b) additional pilot certification
  - c) additional aircraft qualification.
- 4) Required endorsement of a pilot logbook for the satisfactory completion of the required CAAP flight review.
- 5) Required flight instructor records.
- 6) Locating and explaining:
  - a) Airworthiness and registration certificates.
  - b) Operating limitations, placards, instrument markings, and POH/AFM.
  - c) Weight and balance data and equipment list.

*Note: The examiner must select at least one Task.*

*References: PCAR 2, 8; AC 08-013.*

### 3.2 TASK : CERTIFICATES & DOCUMENTS

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to certificates and documents by describing:

- 1) The training requirements for the issuance of recreational, private, and commercial pilot certificates.
- 2) The privileges and limitations of pilot certificates and ratings at recreational, private, and commercial levels.
- 3) Class and duration of medical certificates.
- 4) Recent pilot flight experience requirements.
- 5) Required entries in pilot logbook or flight record.

*References: PCAR 6, 7, 8; AC 08-017, FAA-H-8083-21.*

### 3.3 TASK: AIRWORTHINESS REQUIREMENTS

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to required airworthiness by explaining:

- 1) Required instruments and equipment for day/night VFR.
- 2) Procedures and limitations for determining airworthiness of the airplane with inoperative instruments and equipment without a minimum equipment list (MEL).
- 3) Requirements and procedures for obtaining a special flight permit.
- 4) Airworthiness directives, compliance records, maintenance/inspection requirements, and appropriate records.
- 5) Procedures for deferring maintenance on aircraft without an approved MEL.

*References: PART 8, FSS , ATIS ; FAA-H-8083-25, PAGASA*

### 3.4 TASK: WEATHER INFORMATION

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to weather information by describing:

- 1) Importance of a thorough preflight weather briefing.

- 2) Means and sources of obtaining weather information.
  - a) METAR, TAF, and FA.
  - b) Surface analysis chart.
  - c) Radar summary chart.
  - d) Winds and temperature aloft chart.
  - e) Significant weather prognostic charts.
  - f) Convective outlook chart.
  - g) AWOS, ASOS, and ATIS reports.
- 3) Use of real-time weather reports, forecasts, and charts for developing scenario-based training.
- 4) In-flight weather advisories.
- 5) Recognition of aviation weather hazards to include wind shear.
- 6) Factors to be considered in making a "go/no-go" decision.

### **3.5 TASK: PERFORMANCE & LIMITATIONS**

*References: PART 8; FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25, FAA-S-8081-12, FAA-H-8083-21; POH/AFM.*

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to performance and limitations by describing:

- 1) Determination of weight and balance condition.
- 2) Use of performance charts, tables, and other data in determining performance in various phases of flight.
- 3) Effects of exceeding airplane limitations.
- 4) Effects of atmospheric conditions on performance.
- 5) Conditions that may cause loss of tail rotor effectiveness/ unanticipated loss of directional control.
- 6) Other factors to be considered in determining that required performance is within the helicopter's capabilities.

### **3.6 TASK: OPERATION OF SYSTEMS**

*References: FAA-H-8083-21; Rotorcraft Flight Manual.*

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to operation of systems, as applicable to the helicopter used for the practical test, by describing:

- 1) Power-plant, including controls, indicators, cooling, and fire detection.
  - 2) Main rotor system.
  - 3) Anti-torque system.
  - 4) Landing gear, brakes, and steering system.
  - 5) Fuel, oil, and hydraulic systems.
  - 6) Electrical system.
  - 7) Environmental system.
  - 8) Pitot static/vacuum system and associated instruments.
  - 9) Anti-icing systems.
  - 10) Avionics equipment.
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## SECTION 4 AREA OF OPERATION: PREFLIGHT LESSON ON A MANEUVER TO BE PERFORMED IN FLIGHT

*Note: The examiner must select at least one Task.*

### 4.1 TASK: MANEUVER LESSON

References: AC 02-013; FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-21; POH/AFM, Rotorcraft Flight Manual

**Objective:** To determine that the applicant exhibits instructional knowledge of the selected maneuver by:

- 1) Using a lesson plan that includes all essential items to make an effective and organized presentation.
- 2) Stating the objective.
- 3) Giving an accurate, comprehensive oral description of the maneuver, including the elements and associated common errors.
- 4) Using instructional aids, as appropriate.
- 5) Describing the recognition, analysis, and correction of common errors.

### 4.2 TASK: COCKPIT MANAGEMENT

**Objective:** To determine that the applicant:

- 1) Exhibits instructional knowledge of the elements of cockpit management by describing:
  - a) Proper arranging and securing of essential materials and equipment in the cockpit.
  - b) Proper use and/or adjustment of cockpit items such as safety belts, shoulder harnesses, rudder pedals, and seats.
  - c) Occupant briefing on emergency procedures and use of safety belts.
  - d) Proper utilization of all resources required to operate a flight safely: dispatchers, weather briefers, maintenance personnel, and air traffic control.
- 2) Exhibits instructional knowledge of common errors related to cockpit management by describing:
  - a) Failure to place and secure essential materials and equipment for easy access during flight.
  - b) Failure to properly adjust cockpit items, such as safety belts, shoulder harnesses, rudder pedals, and seats.
  - c) Failure to provide proper adjustment of equipment and controls.
  - d) Failure to provide occupant briefing on emergency procedures and use of safety belts.
  - e) Failure to utilize all resources required to operate a flight safely.
- 3) Demonstrates and simultaneously explains cockpit management from an instructional standpoint.

## SECTION 5 AREA OF OPERATION: PREFLIGHT PROCEDURES

**Note:** The examiner shall select at least one Task.

### 5.1 TASK: PREFLIGHT INSPECTION

**Objective:** To determine that the applicant:

**References:** AC 02-013; FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual; POH/AFM.

- 1) Exhibits instructional knowledge of the elements of a preflight inspection, as applicable to the helicopter used for the practical test, by describing—
  - a) reasons for the preflight inspection, items that should be inspected, and how defects are detected.
  - b) importance of using the appropriate checklist.
  - c) removal of control locks, rotor blade tie-down, and wheel chocks, if applicable.
  - d) determination of fuel, oil, and hydraulic fluid quantity, possible contamination and/or leaks.
  - e) inspection of flight controls.
  - f) detection of visible structural damage.
  - g) importance of proper loading and securing of baggage and equipment.
  - h) use of sound judgment in determining whether the helicopter is in condition for safe flight.
- 2) Exhibits instructional knowledge of common errors related to a preflight inspection by describing—
  - a) failure to use or improper use of checklist.
  - b) hazards which may result from allowing distractions to interrupt a preflight inspection.
  - c) inability to recognize discrepancies.
  - d) failure to ensure servicing with the proper fuel and oil.
- 3) Demonstrates and simultaneously explains a preflight inspection from an instructional standpoint.

### 5.2 TASK: SINGLE-PILOT RESOURCE MANAGEMENT

**Objective:** To determine that the applicant:

**References:** AC 02-013; FAA-H-8083-3, FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual; POH/AFM.

- 1) Exhibits instructional knowledge of the elements of crew resource management by describing—
  - a) proper arranging and securing of essential materials and equipment in the cockpit.
  - b) proper use and/or adjustment of such cockpit items as safety belts, shoulder harnesses, anti-torque pedals, and seats.
  - c) occupant briefing on emergency procedures, rotor blade avoidance, and use of safety belts and shoulder harnesses.
  - d) utilization of all available human resources, maintenance personnel, weather briefers, and air traffic control, and other groups routinely working with the pilot who are involved in decisions that are required to operate a flight safely.

- 2) Exhibits instructional knowledge of common errors related to crew resource management by describing—
  - a) failure to place and secure essential materials and equipment for easy access during flight.
  - b) improper adjustment of equipment and controls.
  - c) failure to brief occupants on emergency procedures, rotor blade avoidance, and use of safety belts and shoulder harnesses.
  - d) failure to utilize all available human resources, maintenance personnel, weather briefers, air traffic control, and other groups routinely working with the pilot who are involved in decisions that are required to operate a flight safely.
- 3) Demonstrates and simultaneously explains crew resource management from an instructional standpoint.

### **5.3 TASK: ENGINE STARTING AND ROTOR ENGAGEMENT**

**Objective:** To determine that the applicant:

*References: AC 02-013; FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual; POH/AFM.*

- 1) Exhibits instructional knowledge of the elements of engine starting and rotor engagement, as appropriate to the helicopter used for the practical test, by describing—
  - a) safety precautions related to engine starting and rotor engagement.
  - b) proper positioning of helicopter to avoid hazards.
  - c) use of external power.
  - d) effect of atmospheric conditions on engine starting and rotor engagement.
  - e) importance of proper friction adjustment.
  - f) importance of following the appropriate checklist.
  - g) adjustment of engine and flight controls during engine start and rotor engagement.
  - h) prevention of undesirable helicopter movement during and after engine start and rotor engagement.
- 2) Exhibits instructional knowledge of common errors related to engine starting and rotor engagement by describing—
  - a) failure to use or improper use of checklist.
  - b) exceeding starter time limitations.
  - c) excessive engine RPM and/or temperatures during start.
  - d) failure to ensure adequate main rotor or tail rotor clearance.
- 3) Demonstrates and simultaneously explains engine starting and rotor engagement from an instructional standpoint.

### **5.4 TASK: BEFORE TAKEOFF CHECK**

**Objective:** To determine that the applicant:

*References: AC 02-013; FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual; POH/AFM.*

- 1) Exhibits instructional knowledge of the elements of the before takeoff check by describing—
  - a) division of attention inside and outside the cockpit.
  - b) importance of following the checklist and responding to each item.
  - c) reasons for ensuring suitable engine temperatures and pressures for run-up and takeoff.

- d) method used to determine that the helicopter is in safe operating condition.
  - e) importance of reviewing emergency procedures.
  - f) method used for ensuring that takeoff area or path is free of hazards.
  - g) method used for ensuring adequate clearance from other traffic.
- 2) Exhibits instructional knowledge of common errors related to the before takeoff check by describing—
- a) failure to use or the improper use of the checklist.
  - b) acceptance of marginal helicopter performance.
  - c) an improper check of controls.
- 3) Demonstrates and simultaneously explains a before takeoff check from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a before takeoff check.

## SECTION 6 AREA OF OPERATION: AIRPORT AND HELIPORT OPERATIONS

*Note: Examiner must select at least one Task.*

### 6.1 TASK: RADIO COMMUNICATIONS AND ATC LIGHT SIGNALS

**Objective:** To determine that the applicant:

*References: AC 02-033; AIP, POH/AFM.*

- 1) Exhibits instructional knowledge of the elements of radio communications and ATC light signals by describing:
- a) Selection and use of appropriate radio frequencies.
  - b) Recommended procedure and phraseology for radio communications.
  - c) Receipt of, acknowledgement of, and compliance with ATC clearances and instructions.
  - d) Interpretation of and compliance with ATC light signals.
- 2) Exhibits instructional knowledge of common errors related to radio communications and ATC light signals by describing:
- a) Use of improper frequencies.
  - b) Improper procedure and phraseology when using radio communications, such as neglecting to state the aircraft call sign/n number at non-towered airports, failure to state position, runway of takeoff, and the airport of operation.
  - c) Failure to acknowledge, or properly comply with, ATC clearances and instructions.
  - d) Failure to understand, or to properly comply with, ATC light signals.
- 3) Demonstrates and simultaneously explains radio communication procedures from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to radio communications and ATC light signals.

## 6.2 TASK: TRAFFIC PATTERNS

**Objective:** To determine that the applicant:

- 1) Exhibits instructional knowledge of the elements of traffic patterns by describing:
  - a) Operations at controlled and uncontrolled airports and heliports.
  - b) Adherence to traffic pattern procedures, instructions, and rules.
  - c) How to maintain proper spacing from other traffic.
  - d) How to maintain the desired ground track.
  - e) Wind shear and wake turbulence avoidance procedures.
  - f) Orientation with the landing area or heliport in use.
  - g) How to establish an approach to a landing area or heliport.
  - h) Use of checklist.
- 4) Exhibits instructional knowledge of common errors related to traffic patterns by describing—
  - a) failure to comply with traffic pattern instructions, procedures, and rules.
  - b) improper correction for wind drift.
  - c) inadequate spacing from other traffic.
  - d) improper altitude or airspeed control.
- 2) Demonstrates and simultaneously explains traffic patterns from an instructional standpoint.
- 3) Analyzes and corrects simulated common errors related to traffic patterns.

*References: AC 02-013; AIP; FAA-H-8083-25, FAA-H-8083-21, Rotorcraft Flight Manual.*

## 6.3 TASK: AIRPORT AND HELIPORT MARKINGS AND LIGHTING

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements of airport and heliport markings and lighting by describing:

- 1) Identification and proper interpretation of airport and heliport markings.
- 2) Identification and proper interpretation of airport and heliport lighting.

## SECTION 7 AREA OF OPERATION: HOVERING MANEUVERS

*Note: The examiner must select at least one Task.*

### 7.1 TASK: VERTICAL TAKEOFF AND LANDING

**Objective.** To determine that the applicant:

*References: AC 02-013; AIP; FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual.*

- 1) Exhibits instructional knowledge of the elements of a vertical takeoff and landing by describing—
  - a) how to establish and maintain proper RPM.
  - b) proper position of collective pitch, cyclic, and anti-torque pedals prior to initiating takeoff.
  - c) ascending vertically, at a suitable rate, to the recommended hovering altitude, in headwind, crosswind, and tailwind conditions.
  - d) descending vertically, at a suitable rate, to a selected touchdown point.

- e) touching down vertically in headwind, crosswind, and tailwind conditions.
  - f) how to maintain desired heading during the maneuver.
- 2) Exhibits instructional knowledge of common errors related to a vertical takeoff and landing by describing—
- a) improper RPM control.
  - b) failure to ascend and descend vertically at a suitable rate.
  - c) failure to recognize and correct undesirable drift.
  - d) improper heading control.
  - e) terminating takeoff at an improper altitude.
  - f) over control of collective pitch, cyclic, or anti-torque pedals.
  - g) failure to reduce collective pitch to the full-down position, smoothly and positively, upon surface contact.
- 3) Demonstrates and simultaneously explains a vertical takeoff and landing from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a vertical takeoff and landing.

## 7.2 TASK: SURFACE TAXI

*Note: This Task applies only to helicopters equipped with wheel-type landing gear.*

**Objective:** To determine that the applicant:

*References: AC 02-013; AIP; FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual.*

- 1) Exhibits instructional knowledge of the elements of surface taxi by describing—
  - a) positioning of cyclic and collective to begin forward movement.
  - b) proper use of cyclic, collective, and brakes to control speed while taxiing.
  - c) use of anti-torque pedals to maintain directional control.
  - d) use of brakes during minimum radius turns.
  - e) proper position of tail wheel (if applicable) locked or unlocked.
  - f) positioning of controls to slow and stop helicopter.
- 2) Exhibits instructional knowledge of common errors related to surface taxi by describing—
  - a) improper positioning of cyclic and collective to start and stop movement.
  - b) improper use of brakes.
  - c) hazards of taxiing too fast.
  - d) improper use of anti-torque pedals.
- 3) Demonstrates and simultaneously explains surface taxi from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to surface taxi.

### 7.3 TASK: HOVER TAXI

**Objective:** To determine that the applicant:

References: AC 02-013; AIP; FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual.

- 1) Exhibits instructional knowledge of the elements of hover taxi by describing—
  - a) how to maintain proper Revolutions Per Minute (RPM).
  - b) maintaining desired ground track and heading.
  - c) how to make precise turns to headings.
  - d) holding recommended hovering altitude.
  - e) appropriate groundspeed.
- 2) Exhibits instructional knowledge of common errors related to hover taxi by describing—
  - a) improper RPM control.
  - b) improper control of heading and track.
  - c) erratic altitude control.
  - d) misuse of flight controls.
- 3) Demonstrates and simultaneously explains hover taxi from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to hover taxi.

### 7.4 TASK: AIR TAXI

**Objective:** To determine that the applicant:

References: AC 02-013; AIP; FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual.

- 1) Exhibits instructional knowledge of the elements of air taxi by describing—
  - a) how to maintain proper RPM.
  - b) selection of an altitude and airspeed appropriate for the operation.
  - c) proper use of collective pitch, cyclic, and anti-torque pedals to maintain desired track and groundspeed in headwind and crosswind conditions.
  - d) compensation for wind effect.
- 2) Exhibits instructional knowledge of common errors related to air taxi by describing—
  - a) improper RPM control.
  - b) erratic altitude and airspeed control.
  - c) improper use of collective pitch, cyclic, and anti-torque pedals during operation.
  - d) improper use of controls to compensate for wind effect.
- 3) Demonstrates and simultaneously explains air taxi from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to air taxi.

### 7.5 TASK: SLOPE OPERATION

**Objective:** To determine that the applicant:

References: AC 02-013; AIP; FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual.

- 1) Exhibits instructional knowledge of the elements of a slope operation by describing—
  - a) factors to consider in selection of slope.
  - b) planning and performance of a slope operation, considering wind effect, obstacles, and discharging of passengers.

- c) effect of slope surface texture.
  - d) how to maintain proper RPM.
  - e) control technique during descent to touchdown on a slope.
  - f) use of brakes (if applicable).
  - g) factors that should be considered to avoid dynamic rollover.
  - h) technique during a slope takeoff and departure.
- 2) Exhibits instructional knowledge of common errors related to a slope operation by describing—
- a) improper planning selection of, approach to, or departure from the slope.
  - b) failure to consider wind effects.
  - c) improper RPM control.
  - d) turning tail of the helicopter upslope.
  - e) lowering down slope skid or wheels too rapidly.
  - f) sliding down slope.
  - g) improper use of brakes (if applicable).
  - h) conditions that, if allowed to develop, may result in dynamic rollover.
- 3) Demonstrates and simultaneously explains a slope operation from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a slope operation.

## SECTION 8 AREA OF OPERATION: TAKEOFFS, LANDINGS, AND GO-AROUNDS

**Note:** The examiner shall select at least one takeoff Task and one approach Task.

### 8.1 TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB

**Objective:** To determine that the applicant:

- 1) Exhibits instructional knowledge of the elements of a normal and crosswind takeoff and climb by describing—
- a) consideration of wind conditions.
  - b) factors affecting takeoff and climb performance.
  - c) how to maintain proper RPM.
  - d) how to establish a stationary position on the surface or a stabilized hover, prior to takeoff in headwind and crosswind conditions.
  - e) presence of effective translational lift.
  - f) acceleration to a normal climb.
  - g) climb airspeed and power setting.
  - h) crosswind correction and ground track during climb.

*References: AC 02-013; FAA-H-8083-9, FAA-H-8083-21,  
Rotorcraft Flight Manual.*

- 2) Exhibits instructional knowledge of common errors related to a normal and crosswind takeoff and climb by describing—
  - a) improper RPM control.
  - b) improper use of cyclic, collective pitch, or anti-torque pedals.
  - c) failure to use sufficient power to avoid settling prior to entering effective translational lift.
  - d) improper coordination of attitude and power during initial phase of climb-out.
  - e) failure to establish and maintain climb power and airspeed.
  - f) drift during climb.
- 3) Demonstrates and simultaneously explains a normal or a crosswind takeoff and climb from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a normal or a crosswind takeoff and climb.

## 8.2 TASK: MAXIMUM PERFORMANCE TAKEOFF AND CLIMB

**Objective:** To determine that the applicant:

*References: AC 02-013; FAA-H-8083-9, FAA-H-8083-21,  
Rotorcraft Flight Manual.*

- 1) Exhibits instructional knowledge of the elements of a maximum performance takeoff and climb by describing—
  - a) importance of considering performance data, to include height/velocity diagram.
  - b) factors related to takeoff and climb performance of the aircraft.
  - c) how to establish and maintain proper RPM.
  - d) preparatory technique prior to increasing collective pitch to initiate takeoff.
  - e) technique to initiate takeoff and establish a forward climb attitude to clear obstacles
  - f) transition to normal climb power and airspeed.
  - g) crosswind correction and track during climb.
- 2) Exhibits instructional knowledge of common errors related to a maximum performance takeoff and climb by describing—
  - a) failure to consider performance data, including height/velocity diagram.
  - b) improper RPM control.
  - c) improper use of cyclic, collective pitch, or anti-torque pedals.
  - d) failure to use the predetermined power setting for establishing attitude and airspeed appropriate to the obstacles to be cleared.
  - e) failure to resume normal climb power and airspeed after obstacle clearance.
  - f) drift during climb.
- 3) Demonstrates and simultaneously explains a maximum performance takeoff and climb from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a maximum performance takeoff and climb.

**8.3 TASK: ROLLING TAKEOFF**

**Note:** This Task applies only to helicopters equipped with wheel-type landing gear.

**Objective:** To determine that the applicant:

- 1) Exhibits instructional knowledge of the elements of a rolling takeoff by describing—
  - a) situations where this maneuver is recommended.
  - b) factors related to takeoff and climb performance of the aircraft.
  - c) how to establish and maintain proper RPM.
  - d) preparatory technique prior to initiating takeoff.
  - e) how to initiate forward accelerating movement on the surface.
  - f) indication of reaching effective translational lift.
  - g) transition to a normal climb airspeed and power setting. h. crosswind correction and track during climb.
- 2) Exhibits instructional knowledge of common errors related to a rolling takeoff by describing—
  - a) improper RPM control.
  - b) improper use of cyclic, collective pitch, or anti-torque pedals.
  - c) failure to maintain heading and ground track.
  - d) failure to attain effective translational lift prior to attempting transition to flight.
  - e) use of excessive forward cyclic during the surface run.
  - f) settling back to the takeoff surface after becoming airborne.
  - g) excessive altitude prior to attaining climb airspeed.
  - h) failure to establish and maintain climb power and airspeed.
- 3) Demonstrates and simultaneously explains a rolling takeoff from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a rolling takeoff.

**8.4 TASK: NORMAL AND CROSSWIND APPROACH**

**References:** AC 02-013; FAA-H-8083-9, FAA-H-8083-21, Rotorcraft Flight Manual.

**Objective:** To determine that the applicant:

- 1) Exhibits instructional knowledge of the elements of a normal and crosswind approach by describing—
    - a) factors affecting performance.
    - b) how to maintain proper RPM.
    - c) establishment and maintenance of the recommended approach angle and rate of closure.
    - d) coordination of flight controls.
    - e) crosswind correction and ground track.
    - f) loss of effective translational lift.
    - g) how to terminate the approach.
-

- 2) Exhibits instructional knowledge of common errors related to a normal and crosswind approach by describing—
  - a) improper RPM control.
  - b) improper approach angle.
  - c) improper use of cyclic to control rate of closure and collective pitch to control approach angle.
  - d) failure to coordinate pedal corrections with power changes.
  - e) failure to arrive at the termination point at zero groundspeed.
- 3) Demonstrates and simultaneously explains a normal or a crosswind approach from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a normal or a crosswind approach.

## 8.5 TASK: STEEP APPROACH

**Objective:** To determine that the applicant:

References: AC 02-013; FAA-H-8083-9, FAA-H-8083-21,  
Rotorcraft Flight Manual.

- 1) Exhibits instructional knowledge of the elements of a steep approach by describing—
  - a) purpose of the maneuver.
  - b) importance of considering performance data, to include height/velocity diagram.
  - c) selection of proper approach angle for obstacle clearance.
  - d) how to maintain proper RPM.
  - e) establishment and maintenance of the appropriate approach angle and rate of closure.
  - f) coordination of flight controls.
  - g) crosswind correction and ground track.
  - h) location where effective translational lift is lost.
  - i) how to terminate the approach.
- 2) Exhibits instructional knowledge of common errors related to a steep approach by describing—
  - a) improper approach angle.
  - b) improper RPM control.
  - c) improper use of cyclic to control rate of closure and collective pitch to control approach angle.
  - d) failure to coordinate pedal corrections with power changes.
  - e) failure to arrive at the termination point at zero groundspeed.
  - f) inability to determine location where effective translational lift is lost.
- 3) Demonstrates and simultaneously explains a steep approach from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a steep approach.

**8.6 TASK: SHALLOW APPROACH AND RUNNING/ROLL-ON LANDING**

**Objective:** To determine that the applicant:

*References: AC 02-013; FAA-H-8083-9, FAA-H-8083-21,  
Rotorcraft Flight Manual.*

- 1) Exhibits instructional knowledge of the elements of a shallow approach and running/roll-on landing by describing—
  - a) purpose of the maneuver.
  - b) effect of landing surface texture.
  - c) factors affecting performance.
  - d) how to maintain proper RPM.
  - e) obstacles and other hazards, which should be considered.
  - f) establishment and maintenance of the recommended approach angle and rate of closure.
  - g) coordination of flight controls.
  - h) crosswind correction and ground track.
  - i) loss of effective translational lift.
  - j) transition from descent to surface contact.
  - k) flight control technique after surface contact.
- 2) Exhibits instructional knowledge of common errors related to a shallow approach and running/roll-on landing by describing—
  - a) improper RPM control.
  - b) improper approach angle.
  - c) improper use of cyclic to control rate of closure and collective pitch to control approach angle.
  - d) failure to coordinate pedal corrections with power changes.
  - e) failure to maintain a speed that will take advantage of effective translational lift during the final phase of approach.
  - f) touching down at an excessive groundspeed.
  - g) failure to touch down in appropriate attitude.
  - h) failure to maintain directional control after touchdown.
- 3) Demonstrates and simultaneously explains a shallow approach and running/roll-on landing from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a shallow approach and running/roll-on landing.

**8.7 TASK: GO- AROUND**

**Objective:** To determine that the applicant:

*References: AC 02-013; FAA-H-8083-9, FAA-H-8083-21,  
Rotorcraft Flight Manual.*

- 1) Exhibits instructional knowledge of the elements of a go-around by describing—
  - a) situations where a go-around is necessary.
  - b) importance of making a timely decision, considering obstacles, loss of translational lift, and engine response time.
  - c) proper use of power throughout maneuver.

- d) timely and coordinated application of flight controls during transition to climb attitude.
  - e) proper track and obstacle clearance during climb.
- 2) Exhibits instructional knowledge of common errors related to a go-around by describing—
- a) failure to recognize a situation where a go-around is necessary.
  - b) hazards of delaying the decision to go around.
  - c) improper application of flight controls during transition to climb attitude.
  - d) failure to control drift and clear obstacles safely.
- 3) Demonstrates and simultaneously explains a go-around from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a go-around.

## **8.8 TASK: APPROACH AND LANDING WITH SIMULATED POWERPLANT FAILURE-MULTIENGINE HELICOPTER**

**Note:** In a multiengine helicopter maneuvering to a landing, the applicant should follow a procedure that simulates the loss of one powerplant.

*References: FAA-H-8083-21, Rotorcraft Flight Manual.*

**Objective:** To determine that the applicant:

- 1) Exhibits instructional knowledge of the elements of an approach and landing with simulated powerplant failure.
- 2) Exhibits adequate knowledge of maneuvering to a landing with a powerplant inoperative, including the controllability factors associated with maneuvering, and the applicable emergency procedures.
- 3) Selects a suitable touchdown point.
- 4) Maintains, prior to beginning the final approach segment, the desired altitude  $\pm$  100 feet, the desired airspeed  $\pm$  10 knots, the desired heading  $\pm$  5°, and maintains desired track.
- 5) Establishes the approach and landing configuration appropriate for the runway or landing area, and adjusts the powerplant controls as required.
- 6) Maintains a normal approach angle and recommended airspeed to the point of transition to touchdown.
- 7) Terminates the approach in a smooth transition to touchdown.
- 8) Completes the after-landing checklist items in a timely manner, after clearing the landing area, and as recommended by the manufacturer.
- 9) Exhibits instructional knowledge of common errors related to approach and landing with simulated powerplant failure by describing—
  - a) hazards resulting from not following manufacturer's recommended procedures in the event of a powerplant failure.
  - b) failure of the pilot to follow the appropriate checklist.
- 10) Demonstrates and simultaneously explains approaching and landing procedures with a simulated powerplant failure.
- 11) Analyzes and corrects simulated common errors related to an approach and landing with simulated powerplant failure.

## SECTION 9 AREA OF OPERATION: FUNDAMENTALS OF FLIGHT

**Note:** The examiner shall select at least one Task.

### 9.1 TASK: STRAIGHT-AND-LEVEL FLIGHT

**Objective:** To determine that the applicant:

References: FAA-H-8083-9; FAA-H-8083-21, Rotorcraft Flight Manual.

- 1) Exhibits instructional knowledge of the elements of straight-and-level flight by describing—
  - a) effect and use of flight controls.
  - b) the Integrated Flight Instruction method.
  - c) trim technique.
  - d) methods that can be used to overcome tenseness and over controlling.
- 2) Exhibits instructional knowledge of common errors related to straight-and-level flight by describing—
  - a) improper coordination of flight controls.
  - b) failure to cross-check and correctly interpret outside and instrument references.
  - c) faulty trim technique.
- 3) Demonstrates and simultaneously explains straight-and-level flight from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to straight-and-level flight.

### 9.2 TASK: LEVEL TURNS

**Objective:** To determine that the applicant:

References: FAA-H-8083-9; FAA-H-8083-21, Rotorcraft Flight Manual.

- 1) Exhibits instructional knowledge of the elements of level turns by describing—
  - a) effect and use of flight controls.
  - b) the Integrated Flight Instruction method.
  - c) trim technique.
  - d) methods that can be used to overcome tenseness and over controlling.
- 2) Exhibits instructional knowledge of common errors related to level turns by describing—
  - a) improper coordination of flight controls.
  - b) failure to cross-check and correctly interpret outside and instrument references.
  - c) faulty trim technique.
- 3) Demonstrates and simultaneously explains level turns from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to level turns.

### 9.3 TASK: STRAIGHT CLIMBS AND CLIMBING TURNS

**Objective:** To determine that the applicant:

References: FAA-H-8083-9; FAA-H-8083-21, Rotorcraft Flight Manual.

- 1) Exhibits instructional knowledge of the elements of straight climbs and climbing turns by describing—

- a) effect and use of flight controls.
  - b) the Integrated Flight Instruction method.
  - c) trim technique.
  - d) methods that can be used to overcome tenseness and over controlling.
- 2) Exhibits instructional knowledge of common errors related to straight climbs and climbing turns by describing—
- a) improper coordination of flight controls.
  - b) failure to cross-check and correctly interpret outside and instrument references.
  - c) faulty trim technique.
- 3) Demonstrates and simultaneously explains straight climbs and climbing turns from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to straight climbs and climbing turns.

#### **9.4 TASK: STRAIGHT DESCENTS AND DESCENDING TURNS**

**Objective:** To determine that the applicant:

*References: FAA-H-8083-9; FAA-H-8083-21, Rotorcraft Flight Manual.*

- 1) Exhibits instructional knowledge of the elements of straight descents and descending turns by describing—
- a) effect and use of flight controls.
  - b) the Integrated Flight Instruction method.
  - c) trim technique.
  - d) methods that can be used to overcome tenseness and over controlling.
- 2) Exhibits instructional knowledge of common errors related to straight descents and descending turns by describing—
- a) improper coordination of flight controls.
  - b) failure to cross-check and correctly interpret outside and instrument references.
  - c) faulty trim technique.
- 3) Demonstrates and simultaneously explains straight descents and descending turns from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to straight descents and descending turns.

## SECTION 10 AREA OF OPERATION: PERFORMANCE MANEUVERS

**Note:** The examiner shall select at least Task 10.2 or 10.3. In addition, applicant shall provide a helicopter appropriate for demonstrating touchdown autorotations.

### 10.1 TASK: RAPID DECELERATION

**Objective:** To determine that the applicant:

References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual

- 1) Exhibits instructional knowledge of the elements of a rapid deceleration by describing—
  - a) purpose of the maneuver.
  - b) how to maintain proper RPM throughout maneuver.
  - c) evaluation of wind direction and speed, terrain, and obstructions.
  - d) proper use of anti-torque pedals.
  - e) selection of an altitude that will permit safe clearance between tail boom and terrain.
  - f) coordinated use of cyclic and collective controls throughout maneuver.
- 2) Exhibits instructional knowledge of common errors related to a rapid deceleration by describing—
  - a) improper RPM control.
  - b) improper use of anti-torque pedals.
  - c) improper coordination of cyclic and collective controls.
  - d) failure to properly control the rate of deceleration.
  - e) stopping of forward motion in a tail-low attitude.
  - f) failure to maintain safe clearance over terrain.
- 3) Demonstrates and simultaneously explains a rapid deceleration from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a rapid deceleration.

### 10.2 TASK: STRAIGHT-IN AUTOROTATION

**Objective:** To determine that the applicant:

References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual

- 1) Exhibits instructional knowledge of the elements of a straight-in autorotation by describing—
  - a) purpose of maneuver.
  - b) selection of a suitable touchdown area.
  - c) how to maintain proper engine and rotor RPM.
  - d) evaluation of wind direction and speed.
  - e) effect of density altitude, gross weight, rotor RPM, airspeed, and wind to determine a touchdown point.
  - f) how and at what point maneuver is initiated.

- g) flight control coordination, aircraft attitude, and autorotational speed.
  - h) deceleration, collective pitch application, and touchdown technique, or
  - i) technique for performing a power recovery to a hover.
- 2) Exhibits instructional knowledge of common errors related to a straight-in autorotation by describing—
- a) improper engine and rotor RPM control.
  - b) uncoordinated use of flight controls, particularly anti-torque pedals.
  - c) improper attitude and airspeed during descent.
  - d) improper judgment and technique during termination.
- 3) Demonstrates and simultaneously explains a straight-in autorotation to touchdown from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a straight-in autorotation.

### 10.3 TASK: 180° AUTOROTATION

**Objective:** To determine that the applicant:

*References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual*

- 1) Exhibits instructional knowledge of the elements of a 180° autorotation by describing—
- a) purpose of maneuver.
  - b) selection of a suitable touchdown area.
  - c) how to maintain proper engine and rotor RPM.
  - d) evaluation of wind direction and speed.
  - e) effect of density altitude, gross weight, rotor RPM, airspeed, and wind to determine a touchdown point.
  - f) how and at what point the maneuver is initiated.
  - g) flight control coordination, aircraft attitude, and autorotation airspeed.
  - h) proper planning and performance of the autorotative turn.
  - i) deceleration, collective pitch application, and touchdown technique, or
  - j) technique for performing a power recovery to a hover.
- 2) Exhibits instructional knowledge of common errors related to a 180° autorotation by describing—
- a) improper engine and rotor RPM control.
  - b) uncoordinated use of flight controls, particularly anti-torque pedals.
  - c) improper attitude and airspeed during descent.
  - d) improper judgment and technique during the termination.
- 3) Demonstrates and simultaneously explains a 180° autorotation to touchdown from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a 180° autorotation.

## SECTION 11 AREA OF OPERATION: EMERGENCY OPERATIONS

**Note:** The examiner shall select at least one Task from 11.1, 11.2, 11.3, or 11.4 to be accomplished in flight and at least one Task from 11.5, 11.6, 11.7, 11.8, 11.9, or 11.10 to be accomplished orally on the ground.

### 11.1 TASK: POWER FAILURE AT A HOVER

**Objective:** To determine that the applicant:

*References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual*

- 1) Exhibits instructional knowledge of the elements related to power failure at a hover by describing—
  - a) recognition of power failure.
  - b) how to maintain a constant heading.
  - c) correction for drift.
  - d) effect of density altitude, height above the surface, gross weight, wind, and rotor RPM on performance.
  - e) autorotation and touchdown technique from a stationary or forward hover.
- 2) Exhibits instructional knowledge of common errors related to power failure at a hover by describing—
  - a) failure to apply correct and adequate pedal when power is reduced.
  - b) failure to correct drift prior to touchdown.
  - c) improper application of collective pitch.
  - d) failure to touch down in a level attitude.
- 3) Demonstrates and simultaneously explains a simulated power failure at a hover from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a simulated power failure at a hover.

**Note:** Simulated power failure at altitude must be given over areas where actual touchdowns can safely be completed in the event of an actual powerplant failure.

### 11.2 TASK: POWER FAILURE AT ALTITUDE

**Note:** Examiner shall direct the applicant to terminate this Task with a power recovery at an altitude high enough to ensure safe touchdown could be accomplished in the event of an actual power failure

**Objective:** To determine that the applicant:

*References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual*

- 1) Exhibits instructional knowledge of the elements related to power failure at altitude by describing—
  - a) importance of being continuously aware of suitable landing areas.
  - b) technique for establishing and maintaining proper rotor RPM, airspeed, and pedal trim during autorotation.
  - c) method used to evaluate wind direction and speed.
  - d) effect of density altitude, gross weight, rotor RPM, airspeed, and wind to determine landing area.

- e) selection of a suitable landing area.
  - f) planning and performance of approach to the selected landing area.
  - g) importance of dividing attention between flying the approach and accomplishing the emergency procedure, as time permits.
  - h) techniques that can be used to compensate for undershooting or overshooting selected landing area.
  - i) when and how to terminate approach.
- 2) Exhibits instructional knowledge of common errors related to power failure at altitude by describing—
- a) failure to promptly recognize the emergency, establish and maintain proper rotor RPM, and confirm engine condition.
  - b) improper judgment in selection of a landing area.
  - c) failure to estimate approximate wind direction and speed.
  - d) uncoordinated use of flight controls during autorotation entry and descent.
  - e) improper attitude and airspeed during autorotation entry and descent.
  - f) failure to fly the most suitable pattern for existing situation.
  - g) failure to accomplish the emergency procedure, as time permits.
  - h) undershooting or overshooting selected landing area.
  - i) uncoordinated use of flight controls during power recovery.
- 3) Demonstrates and simultaneously explains a simulated power failure at altitude from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to power failure at altitude.

### 11.3 TASK: SETTLING-WITH- POWER

**Objective:** To determine that the applicant:

References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM, Rotorcraft Flight Manual

- 1) Exhibits instructional knowledge of the elements related to settling-with-power by describing—
- a) conditions that are likely to result in settling-with-power.
  - b) timely recognition of settling-with-power.
  - c) techniques for recovery.
- 2) Exhibits instructional knowledge of common errors related to settling-with-power by describing—
- a) failure to recognize conditions that are conducive to development of settling-with-power.
  - b) failure to detect first indications of settling-with-power.
  - c) improper use of controls during recovery.
- 3) Demonstrates and simultaneously explains settling-with-power from an instructional standpoint.

**11.4 TASK: LOW ROTOR RPM RECOVERY**

**Note:** The examiner may accomplish this Task orally if the helicopter used for the practical test has a governor that cannot be disabled.

**Objective:** To determine that the applicant:

*References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual*

- 1) Exhibits instructional knowledge of the elements related to low rotor RPM recovery by describing—
  - a) conditions that are likely to result in low rotor RPM.
  - b) potential problems from low rotor RPM if not corrected timely.
  - c) techniques for recovery.
- 2) Exhibits instructional knowledge of common errors related to low rotor RPM recovery by describing—
  - a) failure to recognize conditions that are conducive to the development of low rotor RPM.
  - b) failure to detect the development of low rotor RPM and to initiate prompt corrective action.
  - c) improper use of controls.
- 3) Demonstrates and simultaneously explains low rotor RPM recovery from an instructional standpoint.

**11.5 TASK: ANTI-TORQUE SYSTEM FAILURE**

*References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual*

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to anti-torque system failure by describing:

- 1) Helicopter aerodynamics related to failure.
- 2) Indications of failure.
- 3) Recommended pilot technique to maintain controlled flight.
- 4) How to select a landing area.
- 5) Recommended technique to accomplish a safe landing, when failure occurs.

**11.6 TASK: DYNAMIC ROLLOVER**

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to dynamic rollover by describing:

*References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual*

- 1) Helicopter aerodynamics involved.
  - 2) How interaction between anti-torque thrust, crosswind, slope, cyclic and collective pitch control contribute to dynamic rollover.
  - 3) Preventive actions used for takeoffs and landings on different surfaces.
-

### 11.7 TASK: GROUND RESONANCE

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to ground resonance by describing:

*References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual*

- 1) Aerodynamics involved and association with a fully articulated rotor system.
- 2) Conditions that are conducive to the development of ground resonance.
- 3) Preventive actions used for takeoffs and landings on different surfaces.

### 11.8 TASK: LOW "G" CONDITIONS

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements of low "G" conditions by describing:

*References: Rotorcraft Flight Manual*

- 1) Situations that will cause a low "G" condition.
- 2) Recognition of low "G" conditions.
- 3) Proper recovery procedures to prevent mast bumping.
- 4) Effects of this condition on different types of rotor systems.

### 11.9 TASK: SYSTEMS AND EQUIPMENT MALFUNCTIONS

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to systems and equipment malfunctions by describing recommended pilot action, appropriate to the helicopter used for the practical test, in the following areas:

- 1) Smoke or fire during ground or flight operations.
- 2) Engine/oil and fuel system.
- 3) Carburetor or induction icing.
- 4) Hydraulic system.
- 5) Electrical system.
- 6) Flight controls.
- 7) Rotor/drive system.
- 8) Pitot/static system.
- 9) Any other system or equipment.

*References: AC 02-013; FAA-H-8083-9,FAA-H-8083-21; POH/AFM. Rotorcraft Flight Manual*

### 11.10 TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR

**Objective:** To determine that the applicant exhibits instructional knowledge of the elements related to emergency equipment and survival gear appropriate to the helicopter used for the practical test by describing:

- 1) Location in the helicopter.
- 2) Method of operation or use.
- 3) Servicing.

*References: FAA-H-8083-21; Rotorcraft Flight Manual*

- 4) Storage.
- 5) Equipment and gear appropriate for operation in various climates, over various types of terrain, and over water.

## SECTION 12 AREA OF OPERATION: SPECIAL OPERATIONS

*Note: The examiner shall select at least one Task.*

### 12.1 TASK: CONFINED AREA OPERATION

**Objective:** To determine that the applicant:

*References: FAA-H-8083-9, FAA-H-8083-21;  
POH/AFM, Rotorcraft Flight Manual*

- 1) Exhibits instructional knowledge of the elements of a confined area operation by describing—
  - a) conduct of high and low reconnaissance.
  - b) method used to evaluate wind direction and speed, turbulence, terrain, obstacles, and emergency landing areas.
  - c) selection of a suitable approach path, termination point, and departure path.
  - d) how to maintain proper RPM.
  - e) how to track the selected approach path to the termination point, establishing an acceptable approach angle and rate of closure.
  - f) factors that should be considered in determining whether to terminate at a hover or on the surface.
  - g) conduct of ground reconnaissance and selection of a suitable takeoff point, considering wind and obstructions.
  - h) factors affecting takeoff and climb performance.
  - i) factors to consider in performing a takeoff and climb under various conditions.
- 2) Exhibits instructional knowledge of common errors related to a confined area operation by describing—
  - a) failure to perform, or improper performance of high and low reconnaissance.
  - b) failure to track the selected approach path or to fly an acceptable approach angle and rate of closure.
  - c) improper RPM control.
  - d) inadequate planning to ensure obstacle clearance during the approach or the departure.
  - e) failure to consider emergency landing areas.
  - f) failure to select a definite termination point during the high reconnaissance.
  - g) failure to change the termination point, if conditions so dictate.
  - h) failure to consider effect of wind direction or speed, turbulence, or loss of effective translational lift during the approach.
  - i) improper takeoff and climb technique for existing conditions.
- 3) Demonstrates and simultaneously explains a confined area operation from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a confined area operation.

**12.2 TASK: CONFINED AREA OPERATION**

**Objective:** To determine that the applicant:

*References: FAA-H-8083-9, FAA-H-8083-21,  
POH/AFM. Rotorcraft Flight Manual*

- 1) Exhibits instructional knowledge of the elements of a pinnacle/platform operation by describing—
  - a) conduct of high and low reconnaissance.
  - b) methods used to evaluate wind direction and speed, turbulence, terrain, obstacles, and emergency landing areas.
  - c) selection of a suitable approach path, termination point, and departure path.
  - d) how to maintain proper RPM.
  - e) how to track the selected approach path to the termination point, and establish an acceptable approach angle and rate of closure.
  - f) factors that should be considered in determining whether to terminate in a hover or on the surface.
  - g) selection of a suitable takeoff point, considering wind and obstructions.
  - h) factors affecting takeoff and climb performance.
  - i) factors to consider in performing a takeoff and climb under various conditions.
- 2) Exhibits instructional knowledge of common errors related to a pinnacle/platform operation by describing—
  - a) failure to perform, or improper performance of, high and low reconnaissance.
  - b) failure to track selected approach path or to fly an acceptable approach angle and rate of closure.
  - c) improper RPM control.
  - d) inadequate planning to assure obstacle clearance during approach or departure.
  - e) failure to consider emergency landing areas.
  - f) failure to select a definite termination point during the high reconnaissance.
  - g) failure to change the termination point, if conditions so dictate.
  - h) failure to consider effect of wind direction or speed, turbulence, or loss of effective translational lift during the approach.
  - i) improper takeoff and climb technique for existing conditions.
- 3) Demonstrates and simultaneously explains a pinnacle/platform operation from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to a pinnacle/platform operation.

## SECTION 13 AREA OF OPERATION: POSTFLIGHT PROCEDURES

### 13.1 TASK: AFTER-LANDING AND SECURING

References: AC 02-033; FAA-H-8083-9, POH/AFM,  
Rotorcraft Flight Manual

**Objective:** To determine that the applicant:

- 1) Exhibits instructional knowledge of the elements of after-landing and securing by describing—
  - a) methods to minimize hazardous effects of rotor downwash during hovering to parking area.
  - b) engine temperature stabilization and shutdown.
  - c) method to secure rotor blades and cockpit.
  - d) safety concerns for passenger(s) when exiting.
  - e) postflight inspection to include use of checklist.
  - f) refueling procedures, including safety concerns.
- 2) Exhibits instructional knowledge of common errors related to after-landing and securing by describing—
  - a) hazards resulting from failure to follow recommended procedures.
  - b) failure to conduct a postflight inspection and use a checklist.
- 3) Demonstrates and simultaneously explains after-landing and securing from an instructional standpoint.
- 4) Analyzes and corrects simulated common errors related to after-landing and securing.

**SECTION 14: CHECKLIST****14.1 : APPLICANT SKILL TEST CHECKLIST****Applicant's Skill Test Checklist (Helicopter)****Appointment with Examiner**

Examiner's Name: \_\_\_\_\_

Location: \_\_\_\_\_

Date/Time: \_\_\_\_\_

**Acceptable Aircraft**

- Aircraft Documents:
- Airworthiness Certificate
- Registration Certificate
- Operating Limitations
- Aircraft Maintenance Records:
- Logbook Record of Airworthiness Inspections and AD Compliance

**Personal Equipment**

- Skill Test Standard
- Lesson Plan Library
- Current Aeronautical Charts
- Computer and Plotter
- Flight Plan and Flight Log Forms
- Current AIP, Airport Facility Directory, and Appropriate Publications

**Personal Records**

- Identification – Photo/Signature ID
  - Pilot Certificate
  - Current and Appropriate Medical Certificate
  - Completed CAAP Form 541, Airman Certificate and/or Rating Application
  - CAAP-AEB CoR, Airman Written Test Report or Computer Test Report
  - Pilot Logbook with Appropriate Instructor Endorsements
  - CAAP Notice of Disapproval (if applicable)
  - Approved School Graduation Certificate (if applicable)
  - Examiner's Fee (if applicable)
-

**14.2 : EXAMINER SKILL TEST CHECKLIST****Flight Instructor – Rotorcraft**

Applicant's Name: \_\_\_\_\_

Location: \_\_\_\_\_

Date/Time: \_\_\_\_\_

**SECTION 2 (1). Fundamentals of Instructing**

- A. The Learning Process
- B. Human Behavior
- C. The Teaching Process
- D. Teaching Methods
- E. Critique and Evaluation
- F. Flight Instructor Characteristics and Responsibilities
- G. Planning Instructional Activity

**SECTION 2 (2). Technical Subjects**

- A. Aeromedical Factors
- B. Visual Scanning and Collision Avoidance
- C. Use of Distractions during Flight Training
- D. Principles of Flight
- E. Helicopter Flight Controls
- F. Helicopter Weight and Balance
- G. Navigation and Flight Planning
- H. Night Operations
- I. Regulations and Publications
- J. Airworthiness Requirements
- K. National Airspace System
- L. Logbook Entries and Certificate Endorsements

**SECTION 3. Preflight Preparation**

- A. Certificates and Documents
- B. Weather Information
- C. Operation of Systems
- D. Performance and Limitations

**SECTION 4. Preflight Lesson on a Maneuver to be Performed in Flight**

- A. Maneuver Lesson

**SECTION 5. Preflight Procedures**

- A. Preflight Inspection
  - B. Single-Pilot Resource Management
  - C. Engine Starting and Rotor Engagement
  - D. Before Takeoff Check
-

**SECTION 6. Airport and Heliport Operations**

- A. Radio Communications and ATC Light Signals
- B. Traffic Patterns
- C. Airport and Heliport Markings and Lighting

**SECTION 7. Hovering Maneuvers**

- A. Vertical Takeoff and Landing
- B. Surface Taxi
- C. Hover Taxi
- D. Air Taxi
- E. Slope Operation

**SECTION 8. Takeoffs, Landings, and Go-Arounds**

- A. Normal and Crosswind Takeoff and Climb
- B. Maximum Performance Takeoff and Climb
- C. Rolling Takeoff
- D. Normal and Crosswind Approach
- E. Steep Approach
- F. Shallow Approach and Running/Roll-On Landing
- G. Go-Around
- H. Approach and Landing with Simulated Powerplant Failure – Multiengine Helicopter

**SECTION 9. Fundamentals of Flight**

- A. Straight-and-Level Flight
- B. Level Turns
- C. Straight Climbs and Climbing Turns
- D. Straight Descents and Descending Turns

**SECTION 10. Performance Maneuvers**

- A. Rapid Deceleration
- B. Straight-In Autorotation
- C. 180° Autorotation

**SECTION 11. Emergency Operations**

- A. Power Failure at a Hover
  - B. Power Failure at Altitude
  - C. Setting-With-Power
  - D. Low Rotor RPM Recovery
  - E. Anti-torque System Failure
  - F. Dynamic Rollover
  - G. Ground Resonance
  - H. Low "G" Conditions
  - I. Systems and Equipment Malfunctions
  - J. Emergency Equipment and Survival Gear
-

**SECTION 12. Special Operations**

- A. Confined Area Operation
- B. Pinnacle/Platform Operation

**SECTION 13. Postflight Procedures**

- A. After-Landing and Securing

**SECTION 15: LETTER OF DISCONTINUANCE****15.1 : EXAMINER'S NOTICE OF DISAPPROVAL**

When a skill test is discontinued for reasons other than unsatisfactory performance (i.e., equipment failure, weather, or illness) CAA Form 541, Airman Certificate and/or Rating Application, and, if applicable, the Airman Knowledge Test Report, shall be returned to the applicant. The examiner at that time shall prepare, sign, and issue a Notice of Disapproval to the applicant. The Notice of Disapproval should identify the Areas of Operation and their associated Tasks of the skill test that were successfully completed. The applicant shall be advised that the Notice of Disapproval shall be presented to the examiner when the skill test is resumed, and made part of the certification file.

## 15.2 : SAMPLE EXAMINER'S NOTICE OF DISAPPROVAL



Republic of the Philippines  
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES  
[www.caap.gov.ph](http://www.caap.gov.ph)

(insert date)

### NOTICE OF DISAPPROVAL

(insert name of recipient)  
(insert address)

Dear (insert name):

This letter serves as your notification that the attached Proficiency Check Report dated (insert date of report) indicates that you need further training on the following area/s of operation:

- 1.
- 2.
- 3.

In the interest of public safety, you are directed not to exercise the privileges of your license (insert license number), except to receive flight training, until after a satisfactory result of your proficiency check. Failure to re-schedule and satisfactorily complete the proficiency check within 60 days when the proficiency check was discontinued, will result in suspension of your license in accordance with PCARs.

Respectfully yours,

(insert name)  
CAAP Pilot Examiner  
CC: (insert aviation employer if applicable)