U.S. Department
of Transportation

**Federal Aviation
Administration**

FAA-S-8081-4D

INSTRUMENT RATING
Practical Test Standards

for

AIRPLANE

HELICOPTER

POWERED LIFT

April 2004

**FLIGHT STANDARDS SERVICE
Washington, DC 20591**

NOTE

The publish date for FAA-S-8081-4D is April 2004, but the material will be effective October 1, 2004. All previous editions of the Instrument Rating Practical Test Standards will be obsolete as of this date.

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The following major enhancements were made to FAA-S-8081-4D.

- The reference section has been updated to current FAA publications in use.
- An abbreviation section has been added.
- The "plan of action" is more thoroughly explained to include the reference to use of scenarios.
- Practical tests perquisite requirements have been updated to current rules.
- The use of GPS for navigation and approaches has been clarified and the requirement for a GPS approach has been added.
- Approach terminology has been updated to include Precision Approach (PA), Approach with Vertical Guidance (APV), and Nonprecision Approach (NPA). The requirements for their use have been clarified.
- Testing in modern aircraft with electronic flight instrument displays has been addressed.
- The use of autopilot and flight management during testing has been addressed.
- The requirement for the use of a view-limiting device has been clarified.
- The need for testing in Single-Pilot Resource Management has been addressed and clarified.
- Reference to the metric system has been eliminated.
- The body of the PTS has been updated to include electronic flight instrument displays, flight management systems, GPS, and autopilot usage.
- The need for testing basic instrument flight maneuvers throughout the practical test instead of being treated as separate TASKs has been addressed in AREA OF OPERATION IV.

FAA-S-8081-4D

FOREWORD

The Instrument Rating Practical Test Standards (PTSs) book is published by the Federal Aviation Administration (FAA) to establish the standards for instrument rating certification practical tests for the airplane, helicopter, and powered lift, category and classes. These practical test standards shall also be used for the instrument portion of the commercial pilot–airship practical test. FAA inspectors and designated pilot examiners shall conduct practical tests in compliance with these standards. Flight instructors and applicants should find these standards helpful during training and when preparing for practical tests.

Joseph K. Tintera, Manager
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INTRODUCTION

General Information

The Flight Standards Service of the Federal Aviation Administration (FAA) has developed this practical test as the standard that shall be used by FAA inspectors and designated pilot examiners when conducting instrument rating—airplane, helicopter, and powered lift practical tests, and instrument proficiency checks for all aircraft. This practical test standard (PTS) shall also be used for the instrument portion of the commercial pilot—airship practical test. Instructors are expected to use this PTS when preparing applicants for practical tests. Applicants should be familiar with this PTS and refer to these standards during their training.

This PTS sets forth the practical test requirements for the addition of an instrument rating to a pilot certificate in airplanes, helicopters, and powered-lift aircraft.

Information considered directive in nature is described in this PTS book in terms, such as "shall" and "must," indicating the actions are mandatory. Guidance information is described in terms, such as "should" and "may," indicating the actions are desirable or permissive, but not mandatory.

The FAA gratefully acknowledges the valuable assistance provided by many industry participants who contributed their time and talent in assisting with the revision of these practical test standards.

This PTS may be purchased from the Superintendent of Documents, U.S. Government Printing Office (GPO), Washington, DC 20402-9325, or from http://bookstore.gpo.gov. This PTS is also available for download, in pdf format, from the Flight Standards Service web site at http://av-info.faa.gov.

This PTS is published by the U.S. Department of Transportation, Federal Aviation Administration, Airman Testing Standards Branch, AFS-630, P.O. Box 25082, Oklahoma City, OK 73125. Comments regarding this handbook should be sent, in e-mail form, to AFS630comments@faa.gov.

Practical Test Standard Concept

Title 14 of the Code of Federal Regulations (14 CFR) part 61 specifies the areas in which knowledge and skill must be demonstrated by the applicant before the issuance of an instrument rating. The CFRs provide the flexibility to permit the FAA to publish practical test standards containing the AREAS OF OPERATION and specific TASKs in which pilot competency shall be demonstrated. The FAA will revise this PTS whenever it is determined that changes are needed in the interest of safety. ***Adherence to the provisions of the regulations and the practical test standards is mandatory for evaluation of instrument pilot applicants.***

Practical Test Book Description

This test book contains the instrument rating practical test standards for airplane, helicopter, and powered lift. It also contains TASK requirements for the addition of airplane, helicopter, or powered lift, if an instrument rating is possessed by the applicant in at least one other aircraft category. Refer to the commercial pilot–airship practical test standard to determine the instrument TASKs required for that practical test. Required TASKs for instrument proficiency checks (PC) are also contained in these practical test standards.

AREAS OF OPERATION are phases of the practical test arranged in a logical sequence within each standard. They begin with preflight preparation and end with postflight procedures. The examiner may conduct the practical test in any sequence that results in a complete and efficient test; ***however, the ground portion of the practical test shall be accomplished before the flight portion.***

TASKs are titles of knowledge areas, flight procedures, or maneuvers appropriate to an AREA OF OPERATION.

The applicant who holds an airplane, helicopter, or powered lift instrument rating will not have to take the entire test when applying for an added rating. The TASKs required for each additional instrument rating are shown in the Rating Task Table on page 16.

Applicants for an instrument proficiency check required by 14 CFR section 61.57 must perform to the standards of the TASKs listed in the guidance provided on page 16.

NOTE is used to emphasize special considerations required in the AREA OF OPERATION or TASK.

REFERENCE identifies the publication(s) that describe(s) the TASK. Descriptions of TASKs are not included in the standards because this information can be found in the current issue of the listed references. Publications other than those listed may be used for references if their content conveys substantially the same meaning as the referenced publications.

These practical test standards are based on the following references.

14 CFR part 61	Certification: Pilots and Flight Instructors
14 CFR part 91	General Operating and Flight Rules
FAA-H-8083-3	Airplane Flying Handbook
FAA-H-8083-15	Instrument Flying Handbook
FAA-H-8083-21	Rotorcraft Flying Handbook
FAA-H-8083-25	Pilot's Handbook of Aeronautical Knowledge
FAA-H-8261-1	Instrument Procedures Handbook
AC 00-6	Aviation Weather
AC 00-45	Aviation Weather Services
AC 60-22	Aeronautical Decision Making
AC 60-28	English Language Skill Standards Required by 14 CFR parts 61, 63, and 65
AC 61-134	General Aviation Controlled Flight into Terrain Awareness
AC 61-84	Role of Preflight Preparation
AC 90-48	Pilots' Role in Collision Avoidance
AC 90-94	Guidelines for Using Global Positioning System Equipment for IFR En Route and Terminal Operations and for Nonprecision Instrument Approaches in the U.S. National Airspace System
AC 120-51	Crew Resource Management Training
AIM	Aeronautical Information Manual
DPs	Instrument Departure Procedures
STARs	Standard Terminal Arrivals
AFD	Airport Facility Directory
FDC NOTAMs	National Flight Data Center Notices to Airmen
IAP	Instrument Approach Procedures
Others	Pertinent Pilot's Operating Handbooks FAA-Approved Flight Manuals En Route Low Altitude Charts

The Objective lists the important elements that must be satisfactorily performed to demonstrate competency in a TASK. The Objective includes:

1. specifically what the applicant should be able to do;
2. the conditions under which the TASK is to be performed; and
3. the acceptable standards of performance.

Abbreviations

14 CFR	Title 14 of the Code of Federal Regulations
ADF	Automatic Direction Finder
ADM	Aeronautical Decision Making
AIRMETS	Airman's Meteorological Information
APV	Approach with Vertical Guidance
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
ATS	Air Traffic Service
CDI	Course Deviation Indicator
CFIT	Controlled Flight into Terrain
CRM	Cockpit Resource Management
DA/DH	Decision Altitude/Decision Height
DH	Decision Height
DME	Distance Measuring Equipment
DP	Departure Procedures
FAA	Federal Aviation Administration
FDC	Flight Data Center
FMS	Flight Management System
FSDO	Flight Standards District Office
GLS	GNSS Landing System
GNSS	Global Navigation Satellite System
GPO	Government Printing Office
GPS	Global Positioning System
GPWS	Ground Proximity Warning System
IAP	Instrument Approach Procedures
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IMC	Instrument Meteorological Conditions
LAHSO	Land and Hold Short Operations
LCD	Liquid Crystal Display
LDA	Localizer-type Directional Aid
LED	Light Emitting Diode
LOC	ILS Localizer
LORAN	Long Range Navigation
MAP	Missed Approach Point
MDA	Minimum Descent Attitude
MLS	Microwave Landing System
NAVAID	Navigation Aid
NDB	Non-directional Beacon (Automatic Direction Finder)
NOTAM	Notice to Airmen
NPA	Nonprecision Approach
NWS	National Weather Service
PA	Precision Approach

PC	Proficiency Check
PTS	Practical Test Standard
RAIM	Receiver Autonomous Integrity Monitoring
RMI	Radio Magnetic Indicator
RNAV	Area Navigation
SAS	Stability Augmentation System
SDF	Simplified Directional Facility
SIGMETS	Significant Meteorological Advisory
STAR	Standard Terminal Arrival
TCAS	Traffic Alert and Collision Avoidance System
VDP	Visual Descent Point
VHF	Very High Frequency
VNAV	Vertical Navigation
VOR	Very High Frequency Ominidirectional Range

Use of the Practical Test Standards

The instrument rating practical test standards are designed to evaluate competency in both knowledge and skill.

The FAA requires that all practical tests be conducted in accordance with the appropriate practical test standards and the policies set forth in the INTRODUCTION. Instrument rating applicants shall be evaluated in **ALL** TASKs included in the AREAS OF OPERATION of the appropriate practical test standard (unless noted otherwise).

In preparation for each practical test, the examiner shall develop a written "plan of action" for each practical test. The "plan of action" is a tool, for the sole use of the examiner, to be used in evaluating the applicant. The plan of action need not be grammatically correct or in any formal format. The plan of action must contain all of the required AREAS OF OPERATION and TASKs and any optional TASKs selected by the examiner. The "plan of action" shall incorporate one or more scenarios that will be used during the practical test. The examiner should try to include as many of the TASKs into the scenario portion of the test as possible, but maintain the flexibility to change due to unexpected situations as they arise and still result in an efficient and valid test. ***Any TASK selected for evaluation during a practical test shall be evaluated in its entirety.***

The examiner is not required to follow the precise order in which the AREAS OF OPERATION and TASKs appear in this book. The examiner may change the sequence or combine TASKs with similar Objectives to have an orderly and efficient flow of the practical test. For example, holding procedures may be combined with an approach or missed approach procedures if a holding entry is part of the procedure.

The TASKs apply to airplanes, helicopters, powered lift, and airships. In certain instances, NOTEs describe differences in the performance of a TASK by an "airplane" applicant, "helicopter" applicant, or "powered lift" applicant. When using the practical test standards, the examiner must evaluate the applicant's knowledge and skill in sufficient depth to determine that the standards of performance listed for all TASKs are met.

All TASKs in these practical test standards are required for the issuance of an instrument rating in airplanes, helicopters, and powered lift. However, when a particular element is not appropriate to the aircraft, its equipment, or operational capability, that element may be omitted. Examples of these element exceptions would be high altitude weather phenomena for helicopters, integrated flight systems for aircraft not so equipped, or other situations where the aircraft or operation is not compatible with the requirement of the element.

Special Emphasis Areas

Examiners shall 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 (who is flying the aircraft);
3. stall/spin awareness;
4. collision avoidance;
5. wake turbulence avoidance;
6. LAHSO;
7. runway incursion avoidance;
8. CFIT;
9. ADM and risk management;
10. checklist usage; and
11. 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 and will be evaluated during the practical test.

Practical Test Prerequisites: Instrument Rating

An applicant for an instrument rating practical test is required by 14 CFR part 61 to:

1. hold at least a current private pilot certificate with an aircraft rating appropriate to the instrument rating sought;
2. pass the appropriate instrument rating knowledge test since the beginning of the 24th month before the month in which the practical test is taken;

3. obtain the applicable training and aeronautical experience prescribed for the instrument rating sought;
4. be able to read, speak, write, and understand the English language; and
5. obtain a written statement from an authorized flight instructor certifying that the applicant has been given flight training in preparation for the practical test within 60 days preceding the date of application. The statement shall also state that the instructor finds the applicant competent to pass the practical test and that the applicant has satisfactory knowledge of the subject area(s) in which a deficiency was indicated by the Airman Knowledge Test Report.

If there are questions concerning English language requirements, refer to AC 60-28, English Language Skill Standards Required by 14 CFR parts 61, 63, and 65, or your local FSDO. English language requirements should be determined to be met prior to beginning the practical test.

Aircraft and Equipment Required for the Practical Test

The instrument rating applicant is required by 14 CFR part 61 to provide an airworthy, certificated aircraft for use during the practical test. Its operating limitations must not prohibit the TASKs required on the practical test. Flight instruments are those required for controlling the aircraft without outside references. The required radio equipment is that which is necessary for communications with ATC, and for the performance of two of the following nonprecision approaches: VOR, NDB, GPS, LOC, LDA, SDF, or RNAV and one precision approach: ILS, GLS, or MLS. GPS equipment must be instrument certified and contain the current database. Note: APV approaches may be substituted only for nonprecision approaches in this standard. An APV approach shall not be used in lieu of the required precision approach.

Modern technology has introduced into aviation a new method of displaying flight instruments, such as Electronic Flight Instrument Systems, Integrated Flight Deck displays, and others. For the purpose of the practical test standards, any flight instrument display that utilizes LCD or picture tube like displays will be referred to as "Electronic Flight Instrument Display." Aircraft equipped with this technology may or may not have separate backup flight instruments installed. The abnormal or emergency procedure for loss of the electronic flight instrument display appropriate to the aircraft will be evaluated in the Loss of Primary Instruments TASK. The loss of the primary electronic flight instrument display must be tailored to failures that would normally be encountered in the aircraft. If the aircraft is capable, total failure of the electronic flight instrument display, or a supporting component, with access only to the standby flight instruments or backup display shall be evaluated.

The applicant is required to provide an appropriate view limiting device that is acceptable to the examiner. This device shall be used during all testing that requires testing "solely by reference to instruments." This device must prevent the applicant from having visual reference outside the aircraft, but not prevent the examiner from having visual reference outside the aircraft. A procedure should be established between the applicant and the examiner as to when and how this device should be donned and removed and this procedure briefed before the flight.

The applicant is expected to utilize an autopilot and/or flight management system (FMS), if properly installed, during the instrument practical test to assist in the management of the aircraft. The examiner is expected to test the applicant's knowledge of the systems that are installed and operative during the oral and flight portions of the practical test. The applicant will be required to demonstrate the use of the autopilot and/or FMS during one of the nonprecision approaches.

If the practical test is conducted in the aircraft, and the aircraft has an operable and properly installed GPS, the applicant must demonstrate GPS approach proficiency when asked. If the applicant has contracted for training in an approved course that includes GPS training in the system that is installed in the airplane/simulator/FTD and the airplane/simulator/FTD used for the checking/testing has the same system properly installed and operable, the applicant must demonstrate GPS approach proficiency. When a practical test is conducted for a 14 CFR part 135 operator, the operator's approved training program is the controlling authority.

To obtain an **instrument rating with multiengine privileges,** an applicant must demonstrate competency in a multiengine airplane not limited to center thrust. The multiengine airplane that is used to obtain unlimited multiengine privileges must have a published V_{MC} speed established by the manufacturer, and produce an asymmetrical thrust configuration with the loss of one or more engines. If an instrument flight test is conducted in a multiengine airplane limited to center thrust, a limitation shall be placed on the applicant's certificate: INSTRUMENT RATING, AIRPLANE MULTIENGINE, LIMITED TO CENTER THRUST.

Use of FAA-Approved Flight Simulator or Flight Training Device

An airman applicant for instrument rating certification is authorized to use an FAA-qualified and approved flight simulator or flight training device, to complete certain flight TASK requirements listed in this practical test standard.

When flight TASKs are accomplished in an aircraft, certain TASK elements may be accomplished through "simulated" actions in the interest of safety and practicality, but when accomplished in a flight simulator or flight training device, these same actions would not be "simulated." For example, when in an aircraft, a simulated engine fire may be addressed by retarding the throttle to idle, simulating the shutdown of the engine, simulating the discharge of the fire suppression agent, if applicable, simulating the disconnect of associated electrical, hydraulic, and pneumatics systems. However, when the same emergency condition is addressed in a flight simulator or flight training device, all TASK elements must be accomplished as would be expected under actual circumstances.

Similarly, safety of flight precautions taken in the aircraft for the accomplishment of a specific maneuver or procedure (such as limiting altitude in an approach to stall or setting maximum airspeed for an engine failure expected to result in a rejected takeoff) need not be taken when a flight simulator or flight training device is used.

It is important to understand that whether accomplished in an aircraft, flight simulator, or flight training device, all TASKs and elements for each maneuver or procedure shall have the same performance standards applied equally for determination of overall satisfactory performance.

The applicant must demonstrate all of the instrument approach procedures required by 14 CFR part 61. At least one instrument approach procedure must be demonstrated in an airplane, helicopter, or powered lift as appropriate. One precision and one nonprecision approach not selected for actual flight demonstration may be performed in flight simulators or flight training devices that meet the requirements of appendix 1 of this practical test standard.

Flight Instructor Responsibility

An appropriately rated flight instructor is responsible for training the instrument rating pilot applicant to acceptable standards in all subject matter areas, procedures, and maneuvers included in the TASKs within the appropriate instrument rating practical test standard.

Because of the impact of their teaching activities in developing safe, proficient pilots, flight instructors should exhibit a high level of knowledge, skill, and the ability to impart that knowledge and skill to students. Additionally, the flight instructor must certify that the applicant is able to perform safely as an instrument pilot and is competent to pass the required practical test.

Throughout the applicant's training, the flight instructor is responsible for emphasizing the performance of effective visual scanning, collision avoidance, and runway incursion avoidance procedures. These areas are covered, in part, in AC 90-48, Pilot's Role in Collision Avoidance; FAA-H-8083-3, Airplane Flying Handbook; FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge; and the Aeronautical Information Manual.

Examiner[1] Responsibility

The examiner conducting the practical test is responsible for determining that the applicant meets the acceptable standards of knowledge and skill of each TASK within the appropriate practical test standard. Since there is no formal division between the "oral" and "skill" portions of the practical test, this becomes an ongoing process throughout the test. To avoid unnecessary distractions, oral questioning should be used judiciously at all times, especially during the flight portion of the practical test.

Examiners shall test to the greatest extent practicable the applicant's correlative abilities rather than mere rote enumeration of facts throughout the practical test.

If the examiner determines that a TASK is incomplete, or the outcome uncertain, the examiner may require the applicant to repeat that TASK, or portions of that TASK. This provision has been made in the interest of fairness and does not mean that instruction, practice, or the repeating of an unsatisfactory TASK is permitted during the certification process.

During the flight portion of the practical test, the examiner shall evaluate the applicant's use of visual scanning, and collision avoidance procedures, when appropriate. Except for takeoff and landing, all TASKs shall be conducted solely by reference to instruments under actual or simulated instrument flight conditions.

The examiner may not assist the applicant in the management of the aircraft, radio communications, navigational equipment, and navigational charts. In the event the test is conducted in an aircraft operation requiring a crew of two, the examiner may assume the duties of the second in command. Helicopters certified for IFR operations must be flown using two pilots or single pilot with an approved autopilot or a SAS. Therefore, when conducting practical tests in a helicopter (without autopilot, SAS, or copilot), examiners may act as an autopilot (e.g., hold heading and altitude), when requested, to allow applicants to tune radios, select charts, etc.

[1] The word "examiner" is used throughout the standard to denote either the FAA inspector or FAA designated pilot examiner who conducts an official practical test.

Examiners may perform the same functions as an autopilot but should not act as a copilot performing more extensive duties. The examiner shall remain alert for other traffic at all times. The examiner shall use proper ATC terminology when simulating ATC clearances.

Satisfactory Performance

Satisfactory performance to meet the requirements for certification is based on the applicant's ability to safely:

1. perform the TASKs specified in the AREAS OF OPERATION for the certificate or rating sought within the approved standards;
2. demonstrate mastery of the aircraft with the successful outcome of each TASK performed never seriously in doubt;
3. demonstrate satisfactory proficiency and competency within the approved standards;
4. demonstrate sound judgment and ADM; and
5. demonstrate single-pilot competence if the aircraft is type certificated for single-pilot operations.

Unsatisfactory Performance

The tolerances represent the performance expected in good flying conditions. If, in the judgment of the examiner, the applicant does not meet the standards of performance of any TASK performed, the associated AREA OF OPERATION is failed and therefore, the practical test is failed.

Note: The tolerances stated in this standard are intended to be used as a measurement of the applicant's ability to operate in the instrument environment. They provide guidance for examiners to use in judging the applicant's qualifications. The regulations governing the tolerances for operation under Instrument Flight Rules are established in 14 CFR part 91.

The examiner or applicant may discontinue the test at any time when the failure of an AREA OF OPERATION makes the applicant ineligible for the certificate or rating sought. ***The test may be continued ONLY with the consent of the applicant.*** If the test is discontinued, the applicant is entitled credit for only those AREAS OF OPERATION and their associated TASKs satisfactorily performed. However, during the retest, and at the discretion of the examiner, any TASK may be re-evaluated, including those previously passed.

Typical areas of unsatisfactory performance and grounds for disqualification are:

1. Any action or lack of action by the applicant that requires corrective intervention by the examiner to maintain safe flight.
2. Failure to use proper and effective visual scanning techniques, when applicable, to clear the area before and while performing maneuvers.
3. Consistently exceeding tolerances stated in the Objectives.
4. Failure to take prompt corrective action when tolerances are exceeded.

When a notice of disapproval is issued, the examiner shall record the applicant's unsatisfactory performance in terms of the AREA OF OPERATION and specific TASK(s) not meeting the standard appropriate to the practical test conducted. The AREA(s) OF OPERATION/TASK(s) not tested and the number of practical test failures shall also be recorded. If the applicant fails the practical test because of a special emphasis area, the Notice of Disapproval shall indicate the associated TASK. For example, AREA OF OPERATION VI, TASK E, Landing From a Straight-in or Circling Approach, failure to avoid runway incursion.

Letter of Discontinuance

When a practical test is discontinued for reasons other than unsatisfactory performance (i.e., equipment failure, weather, or illness) FAA Form 8700-1, 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 Letter of Discontinuance to the applicant. The Letter of Discontinuance should identify the AREAS OF OPERATION and their associated TASKs of the practical test that were successfully completed. The applicant shall be advised that the Letter of Discontinuance shall be presented to the examiner when the practical test is resumed, and made part of the certification file.

Aeronautical Decision Making And Risk Management

The examiner shall evaluate the applicant's ability throughout the practical test to use good aeronautical decision making procedures in order to evaluate risks. The examiner shall accomplish this requirement by developing scenarios that incorporate as many TASKs as possible to evaluate the applicants risk management in making safe aeronautical decisions. For example, the examiner may develop a scenario that incorporates weather decisions and performance planning.

The applicant's ability to utilize all the assets available in making a risk analysis to determine the safest course of action is essential for satisfactory performance. The scenarios should be realistic and within the capabilities of the aircraft used for the practical test.

Single-Pilot Resource Management

Single-Pilot Resource Management refers to the effective use of ALL available resources: human resources, hardware, and information. It is similar to Crew Resource Management (CRM) procedures that are being emphasized in multi-crewmember operations except that only one crewmember (the pilot) is involved. Human resources "...includes all other groups routinely working with the pilot who are involved in decisions that are required to operate a flight safely. These groups include, but are not limited to: dispatchers, weather briefers, maintenance personnel, and air traffic controllers." Pilot Resource Management is not a single TASK; it is a set of skill competencies that must be evident in all TASKs in this practical test standard as applied to single-pilot operation.

Applicant's Use of Checklists

Throughout the practical test, the applicant is evaluated on the use of an appropriate checklist. Proper use is dependent on the specific TASK being evaluated. The situation may be such that the use of the checklist, while accomplishing elements of an Objective, would be either unsafe or impracticable, especially in a single-pilot operation. In this case, a review of the checklist after the elements have been accomplished would be appropriate. Division of attention and proper visual scanning should be considered when using a checklist.

Use of Distractions During Practical Tests

Numerous studies indicate that many accidents have occurred when the pilot has been distracted during critical phases of flight. To evaluate the pilot's ability to utilize proper control technique while dividing attention both inside and/or outside the cockpit, the examiner shall cause a realistic distraction during the flight portion of the practical test to evaluate the applicant's ability to divide attention while maintaining safe flight.

Positive Exchange of Flight Controls

During flight, there must always be a clear understanding between pilots of who has control of the aircraft. Prior to flight, a briefing should be conducted that includes the procedure for the exchange of flight controls. A positive three-step process in the exchange of flight controls between pilots is a proven procedure and one that is strongly recommended.

When one pilot wishes to give the other pilot control of the aircraft, he or she will say, "You have the flight controls." The other pilot acknowledges immediately by saying, "I have the flight controls." The first pilot again says "You have the flight controls." When control is returned to the first pilot, follow the same procedure. A visual check is recommended to verify that the exchange has occurred. There should never be any doubt as to who is flying the aircraft.

Emphasis on Attitude Instrument Flying and Emergency Instrument Procedures

The FAA is concerned about numerous fatal aircraft accidents involving spatial disorientation of instrument-rated pilots who have attempted to control and maneuver their aircraft in clouds with inoperative primary flight instruments (gyroscopic heading and/or attitude indicators) or loss of the primary electronic flight instruments display.

AREA OF OPERATION IV requires the evaluation of basic instrument flight maneuvers under both full-panel and references to backup primary flight instruments/electronic flight instrument displays. These maneuvers are described in detail in FAA-H-8083-15, Instrument Flying Handbook. Examiners should determine that the applicant demonstrates competency in either the PRIMARY and SUPPORTING or the CONTROL and PERFORMACE CONCEPT method of instrument flying. Either attitude instrument flying method is described in FAA-H-8083-15 and is recommended by the FAA because it requires specific knowledge and interpretation of each individual instrument during training.

The FAA has stressed that it is imperative for instrument pilots to acquire and maintain adequate instrument skills and that they be capable of performing instrument flight with the use of the backup systems installed in the aircraft. Many light aircraft operated in IMC are not equipped with dual, independent, gyroscopic heading and/or attitude indicators and in many cases are equipped with only a single-vacuum source. Technically advanced aircraft may be equipped with backup flight instruments or an additional electronic flight display that is not located directly in front of the pilot.

The instrument rating practical test standards place emphasis on and requires the demonstrations of a nonprecision instrument approach without the use of the primary flight instruments or electronic flight instrument display. A nonprecision approach without the use of the primary flight instruments/electronic flight instrument display is considered one of the most demanding situations that could be encountered. If applicants can master this situation, they can successfully complete a less difficult precision approach. If an actual approach in IMC becomes necessary without the aid of the primary flight instruments/ electronic flight instrument display, a less difficult precision approach should be requested, if available. Sound judgment would normally dictate such requests. However, the instrument practical test requires that a nonprecision approach be performed without the use of the primary flight instruments/electronic flight instrument display.

Applicants may have an unfair advantage during performance of the TASK using the backup flight instruments during an instrument approach due to the location of the magnetic compass in some aircraft. When crosschecking the magnetic compass heading, a view of the runway or other visual clue may be sighted. It is the examiner's responsibility to determine if the applicant is receiving visual clues from outside the cockpit. If an examiner feels that the applicant is receiving visual clues, the examiner may devise other options to limit the applicant's view. By no means shall the examiner limit his or her view as the safety pilot.

RATING TASK TABLE

AREA OF OPERATION	ADDITIONAL INSTRUMENT RATING DESIRED Required TASKS are indicated by either the TASK letter(s) that apply(s) or an indication that all or none of the TASKS must be tested.			
	IA	IH	IPL	IPC
I	NONE	NONE	NONE	NONE
II	A, C	A, C	A, C	NONE
III	NONE	NONE	NONE	C
IV	ALL	ALL	ALL	B
V	NONE	NONE	NONE	ALL
VI	ALL	ALL	ALL	ALL*
VII	ALL**	ALL**	ALL**	B, C, D
VIII	ALL	ALL	ALL	ALL

LEGEND
IA - Instrument airplane
IH - Instrument helicopter
IPL - Instrument powered lift
IPC – Instrument Proficiency check

NOTE: Except as noted, all TASKs are required for *initial issuance* of an instrument rating.

* TASK D, Circling Approach, is applicable *only to* the *airplane* category.

** TASKS B and C are applicable *only* to *multiengine airplanes*.

Instrument Proficiency Check. 14 CFR part 61.57(d) sets forth the requirements for an instrument proficiency check. The person giving that check shall use the standards and procedures contained in this PTS when administering the check. A representative number of TASKs, as determined by the examiner/instructor, must be selected to assure the competence of the applicant to operate in the IFR environment. As a minimum, the applicant must demonstrate the ability to perform the TASKs as listed in the above chart. The person giving the check should develop scenarios to assess the pilot's ADM and risk management skills during the IPC.

CONTENTS

APPLICANT'S PRACTICAL TEST CHECKLIST

APPOINTMENT WITH EXAMINER:

EXAMINER'S NAME_____

LOCATION _____

DATE/TIME _____

ACCEPTABLE AIRCRAFT

View-limiting device
Aircraft Documents: Airworthiness Certificate
Registration Certificate
Rating Limitations
Aircraft Maintenance Records: Airworthiness Inspections

PERSONAL EQUIPMENT

Current Aeronautical Charts
Computer and Plotter
Flight Plan Form
Flight Logs
Current AIM

PERSONAL RECORDS

Identification - Photo/Signature ID
Pilot Certificate
Medical Certificate
Completed FAA Form 8710-1, Application for an Airman Certificate and/or Rating
Airman Knowledge Test Report
Logbook with Instructor's Endorsement
Notice of Disapproval (if applicable)
Approved School Graduation Certificate (if applicable)
Examiner's Fee (if applicable)

EXAMINER'S PRACTICAL TEST CHECKLIST

APPLICANT'S NAME_____

LOCATION_____

DATE/TIME_____

I. PREFLIGHT PREPARATION

A. Weather Information
B. Cross-Country Flight Planning

II. PREFLIGHT PROCEDURES

A. Aircraft Systems Related to IFR Operations
B. Aircraft Flight Instruments and Navigation Equipment
C. Instrument Cockpit Check

III. AIR TRAFFIC CONTROL CLEARANCES AND PROCEDURES

A. Air Traffic Control Clearances
B. Compliance with Departure, En Route, and Arrival Procedures and Clearances
C. Holding Procedures

IV. FLIGHT BY REFERENCE TO INSTRUMENTS

A. Basic Instrument Flight Maneuvers
B. Recovery from Unusual Flight Attitudes

V. NAVIGATION SYSTEMS

A. Intercepting and Tracking Navigational Systems and DME Arcs

VI. INSTRUMENT APPROACH PROCEDURES

A. Nonprecision Approach (NPA)
B. Precision Approach (PA)
C. Missed Approach
D. Circling Approach
E. Landing from a Straight-in or Circling Approach

VII. EMERGENCY OPERATIONS

A. Loss of Communications
B. One Engine Inoperative During Straight-and-Level Flight and Turns (Multiengine Airplane)
C. One Engine Inoperative—Instrument Approach (Multiengine Airplane)
D. Loss of Primary Flight Instrument Indicators

VIII. POSTFLIGHT PROCEDURES

A. Checking Instruments and Equipment

I. AREA OF OPERATION: PREFLIGHT PREPARATION

A. TASK: WEATHER INFORMATION

REFERENCES: 14 CFR part 61; AC 00-6, AC 00-45; AIM.

NOTE: Where current weather reports, forecasts, or other pertinent information is not available, this information will be simulated by the examiner in a manner that will adequately measure the applicant's competence.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to aviation weather information by obtaining, reading, and analyzing the applicable items, such as—
    a. weather reports and forecasts.
    b. pilot and radar reports.
    c. surface analysis charts.
    d. radar summary charts.
    e. significant weather prognostics.
    f. winds and temperatures aloft.
    g. freezing level charts.
    h. stability charts.
    i. severe weather outlook charts.
    j. SIGMETs and AIRMETs.
    k. ATIS reports.
2. Correctly analyzes the assembled weather information pertaining to the proposed route of flight and destination airport, and determines whether an alternate airport is required, and, if required, whether the selected alternate airport meets the regulatory requirement.

B. TASK: CROSS-COUNTRY FLIGHT PLANNING

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15, FAA-H-8083-25; AC 90-94; AFD; AIM.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements by presenting and explaining a preplanned cross-country flight, as previously assigned by the examiner (preplanning is at examiner's discretion). It should be planned using real time weather and conform to the regulatory requirements for instrument flight rules within the airspace in which the flight will be conducted.
2. Exhibits adequate knowledge of the aircraft's performance capabilities by calculating the estimated time en route and total fuel requirement based upon factors, such as—
    a. power settings.
    b. operating altitude or flight level.
    c. wind.
    d. fuel reserve requirements.
3. Selects and correctly interprets the current and applicable en route charts, instrument departure procedures (DPs), RNAV, STAR, and Standard Instrument Approach Procedure Charts (IAP).
4. Obtains and correctly interprets applicable NOTAM information.
5. Determines the calculated performance is within the aircraft's capability and operating limitations.
6. Completes and files a flight plan in a manner that accurately reflects the conditions of the proposed flight. (Does not have to be filed with ATC.)
7. Demonstrates adequate knowledge of GPS and RAIM capability, when aircraft is so equipped.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

A. TASK: AIRCRAFT SYSTEMS RELATED TO IFR OPERATIONS

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; AC 61-84.

Objective. To determine that the applicant exhibits adequate knowledge of the elements related to applicable aircraft anti-icing/deicing system(s) and their operating methods to include:

1. Airframe.
2. Propeller.
3. Intake.
4. Fuel.
5. Pitot-static.

B. TASK: AIRCRAFT FLIGHT INSTRUMENTS AND NAVIGATION EQUIPMENT

REFERENCES: 14 CFR parts 61, 91; AC 61-27, AC 61-84, AC 90-48.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to applicable aircraft flight instrument system(s) and their operating characteristics to include—
    a. pitot-static.
    b. altimeter.
    c. airspeed indicator.
    d. vertical speed indicator.
    e. attitude indicator.
    f. horizontal situation indicator.
    g. magnetic compass.
    h. turn-and-slip indicator/turn coordinator.
    i. heading indicator.
    j. electrical systems.
    k. vacuum systems.
    l. electronic flight instrument display.

2. Exhibits adequate knowledge of the applicable aircraft navigation system(s) and their operating characteristics to include—
    a. VOR.
    b. DME.
    c. ILS.
    d. marker beacon receiver/indicators.
    e. transponder/altitude encoding.
    f. ADF.
    g. GPS.
    h. FMS.

C. TASK: INSTRUMENT COCKPIT CHECK

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to preflighting instruments, avionics, and navigation equipment cockpit check by explaining the reasons for the check and how to detect possible defects.
2. Performs the preflight on instruments, avionics, and navigation equipment cockpit check by following the checklist appropriate to the aircraft flown.
3. Determines that the aircraft is in condition for safe instrument flight including—
    a. communications equipment.
    b. navigation equipment, as appropriate to the aircraft flown.
    c. magnetic compass.
    d. heading indicator.
    e. attitude indicator.
    f. altimeter.
    g. turn-and-slip indicator/turn coordinator.
    h. vertical speed indicator.
    i. airspeed indicator.
    j. clock.
    k. power source for gyro-instruments.
    l. pitot heat.
    m. electronic flight instrument display
    n. traffic awareness/warning/avoidance system.
    o. terrain awareness/warning/alert system.
    p. FMS.
    q. auto pilot.
4. Notes any discrepancies and determines whether the aircraft is safe for instrument flight or requires maintenance.

III. AREA OF OPERATION: AIR TRAFFIC CONTROL CLEARANCES AND PROCEDURES

NOTE: The ATC clearance may be an actual or simulated ATC clearance based upon the flight plan.

A. TASK: AIR TRAFFIC CONTROL CLEARANCES

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; AIM.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to ATC clearances and pilot/controller responsibilities to include tower en route control and clearance void times.
2. Copies correctly, in a timely manner, the ATC clearance as issued.
3. Determines that it is possible to comply with ATC clearance.
4. Interprets correctly the ATC clearance received and, when necessary, requests clarification, verification, or change.
5. Reads back correctly, in a timely manner, the ATC clearance in the sequence received.
6. Uses standard phraseology when reading back clearance.
7. Sets the appropriate communication and navigation systems and transponder codes in compliance with the ATC clearance.

B. TASK: COMPLIANCE WITH DEPARTURE, EN ROUTE, AND ARRIVAL PROCEDURES AND CLEARANCES

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; DPs; En Route Low Altitude Charts; STARs.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to ATS routes, and related pilot/controller responsibilities.
2. Uses the current and appropriate navigation publications for the proposed flight.
3. Selects and uses the appropriate communication facilities; selects and identifies the navigation aids associated with the proposed flight.
4. Performs the appropriate aircraft checklist items relative to the phase of flight.
5. Establishes two-way communications with the proper controlling agency, using proper phraseology.
6. Complies, in a timely manner, with all ATC instructions and airspace restrictions.

7. Exhibits adequate knowledge of communication failure procedures.
8. Intercepts, in a timely manner, all courses, radials, and bearings appropriate to the procedure, route, or clearance.
9. Maintains the applicable airspeed within +/-10 knots; headings within +/-10°; altitude within +/-100 feet; and tracks a course, radial or bearing within ¾ scale deflection of the CDI.

C. TASK: HOLDING PROCEDURES

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; AIM.

NOTE: Any reference to DME will be disregarded if the aircraft is not so equipped.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to holding procedures.
2. Changes to the holding airspeed appropriate for the altitude or aircraft when 3 minutes or less from, but prior to arriving at, the holding fix.
3. Explains and uses an entry procedure that ensures the aircraft remains within the holding pattern airspace for a standard, nonstandard, published, or nonpublished holding pattern.
4. Recognizes arrival at the holding fix and initiates prompt entry into the holding pattern.
5. Complies with ATC reporting requirements.
6. Uses the proper timing criteria, where applicable, as required by altitude or ATC instructions.
7. Complies with pattern leg lengths when a DME distance is specified.
8. Uses proper wind correction procedures to maintain the desired pattern and to arrive over the fix as close as possible to a specified time.
9. Maintains the airspeed within +/-10 knots; altitude within +/-100 feet; headings within +/-10°; and tracks a selected course, radial or bearing within ¾ scale deflection of the CDI.

IV. AREA OF OPERATION: FLIGHT BY REFERENCE TO INSTRUMENTS

A. TASK: BASIC INSTRUMENT FLIGHT MANEUVERS (IA, IH, PL, AA, HA, PLA, PC)

REFERENCES: 14 CFR part 61; FAA-H-8083-15.

Objective. To determine the applicant can perform basic flight maneuvers.

1. Exhibits adequate knowledge of the elements related to attitude instrument flying during straight-and-level, climbs, turns, and descents while conducting various instrument flight procedures.
2. Maintains altitude within +/- 100 feet during level flight, headings within +/- 10°, airspeed within +/- 10 knots, and bank angles within +/- 5° during turns.
3. Uses proper instrument crosscheck and interpretation, and apply the appropriate pitch, bank, power, and trim corrections when applicable.

B. TASK: RECOVERY FROM UNUSUAL FLIGHT ATTITUDES

REFERENCES: 14 CFR part 61; FAA-H-8083-15.

NOTE: Any intervention by the examiner to prevent the aircraft from exceeding any operating limitations, or entering an unsafe flight condition, shall be disqualifying.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements relating to attitude instrument flying during recovery from unusual flight attitudes (both nose-high and nose-low).
2. Uses proper instrument cross-check and interpretation, and applies the appropriate pitch, bank, and power corrections in the correct sequence to return the aircraft to a stabilized level flight attitude.

V. AREA OF OPERATION: NAVIGATION SYSTEMS

A. TASK: INTERCEPTING AND TRACKING NAVIGATIONAL SYSTEMS AND DME ARCS

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; AIM.

NOTE: Any reference to DME arcs, ADF, or GPS shall be disregarded if the aircraft is not equipped with these specified navigational systems.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to intercepting and tracking navigational systems and DME arcs.
2. Tunes and correctly identifies the navigation facility.
3. Sets and correctly orients the course to be intercepted into the course selector or correctly identifies the course on the RMI.
4. Intercepts the specified course at a predetermined angle, inbound or outbound from a navigational facility.
5. Maintains the airspeed within +/-10 knots, altitude within +/-100 feet, and selected headings within +/-5°.
6. Applies proper correction to maintain a course, allowing no more than three-quarter-scale deflection of the CDI or within +/-10° in case of an RMI.
7. Determines the aircraft position relative to the navigational facility or from a waypoint in the case of GPS.
8. Intercepts a DME arc and maintain that arc within +/-1 nautical mile.
9. Recognizes navigational receiver or facility failure, and when required, reports the failure to ATC.

VI. AREA OF OPERATION: INSTRUMENT APPROACH PROCEDURES

NOTE: TASK D, Circling Approach, is applicable only to the airplane category.

NOTE: The requirements for conducting a GPS approach for the purpose of this test are explained on page 8 of the Introduction.

A. TASK: NONPRECISION APPROACH (NPA)

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; IAP; AIM.

NOTE: The applicant must accomplish at least two nonprecision approaches (one of which must include a procedure turn or, in the case of an RNAV approach, a Terminal Arrival Area (TAA) procedure) in simulated or actual weather conditions. At least one nonprecision approach must be flown without the use of autopilot and without the assistance of radar vectors. (The yaw damper and flight director are not considered parts of the autopilot for purpose of this part). The examiner will select nonprecision approaches that are representative of the type that the applicant is likely to use. The choices must utilize two different types of navigational aids. Some examples of navigational aids for the purpose of this part are: NDB, VOR, LOC, LDA, GPS, or RNAV.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to an instrument approach procedure.
2. Selects and complies with the appropriate instrument approach procedure to be performed.
3. Establishes two-way communications with ATC, as appropriate, to the phase of flight or approach segment, and uses proper communication phraseology and technique.
4. Selects, tunes, identifies, and confirms the operational status of navigation equipment to be used for the approach procedure.
5. Complies with all clearances issued by ATC or the examiner.
6. Recognizes if any flight instrumentation is inaccurate or inoperative, and takes appropriate action.
7. Advises ATC or examiner anytime that the aircraft is unable to comply with a clearance.

8. Establishes the appropriate aircraft configuration and airspeed considering turbulence and wind shear, and completes the aircraft checklist items appropriate to the phase of the flight.
9. Maintains, prior to beginning the final approach segment, altitude within +/-100 feet, heading within +/-10° and allows less than ¾ scale deflection of the CDI or within +/-10° in the case of an RMI, and maintains airspeed within +/-10 knots.
10. Applies the necessary adjustments to the published MDA and visibility criteria for the aircraft approach category when required, such as—
    a. NOTAMs.
    b. inoperative aircraft and ground navigation equipment.
    c. inoperative visual aids associated with the landing environment.
    d. NWS reporting factors and criteria.
11. Establishes a rate of descent and track that will ensure arrival at the MDA prior to reaching the MAP with the aircraft continuously in a position from which descent to a landing on the intended runway can be made at a normal rate using normal maneuvers.
12. Allows, while on the final approach segment, no more than a three-quarter-scale deflection of the CDI or within 10° in case of an RMI, and maintains airspeed within +/-10 knots of that desired.
13. Maintains the MDA, when reached, within +100 feet, -0 feet to the MAP.
14. Executes the missed approach procedure when the required visual references for the intended runway are not distinctly visible and identifiable at the MAP.
15. Executes a normal landing from a straight-in or circling approach when instructed by the examiner.

B. TASK: PRECISION APPROACH (PA)

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; IAP; AIM.

NOTE: A precision approach, utilizing aircraft NAVAID equipment for centerline and vertical guidance, must be accomplished in simulated or actual instrument conditions to DA/DH.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the precision instrument approach procedures.
2. Accomplishes the appropriate precision instrument approaches as selected by the examiner.
3. Establishes two-way communications with ATC using the proper communications phraseology and techniques, as required for the phase of flight or approach segment.
4. Complies, in a timely manner, with all clearances, instructions, and procedures.
5. Advises ATC anytime that the applicant is unable to comply with a clearance.
6. Establishes the appropriate airplane configuration and airspeed/V-speed considering turbulence, wind shear, microburst conditions, or other meteorological and operating conditions.
7. Completes the aircraft checklist items appropriate to the phase of flight or approach segment, including engine out approach and landing checklists, if appropriate.
8. Prior to beginning the final approach segment, maintains the desired altitude +/-100 feet, the desired airspeed within +/-10 knots, the desired heading within +/-10°; and accurately tracks radials, courses, and bearings.
9. Selects, tunes, identifies, and monitors the operational status of ground and airplane navigation equipment used for the approach.
10. Applies the necessary adjustments to the published DA/DH and visibility criteria for the airplane approach category as required, such as—
    a. NOTAMs
    b. inoperative airplane and ground navigation equipment.
    c. inoperative visual aids associated with the landing environment.
    d. NWS reporting factors and criteria.

11. Establishes a predetermined rate of descent at the point where the electronic glide slope begins, which approximates that required for the aircraft to follow the glide slope.
12. Maintains a stabilized final approach, from the Final Approach Fix to DA/DH allowing no more than three-quarter scale deflection of either the glide slope or localizer indications and maintains the desired airspeed within +/-10 knots.
13. A missed approach or transition to a landing shall be initiated at Decision Height.
14. Initiates immediately the missed approach when at the DA/DH, and the required visual references for the runway are not unmistakably visible and identifiable.
15. Transitions to a normal landing approach (missed approach for seaplanes) only when the aircraft is in a position from which a descent to a landing on the runway can be made at a normal rate of descent using normal maneuvering.
16. Maintains localizer and glide slope within three-quarter-scale deflection of the indicators during the visual descent from DA/DH to a point over the runway where glide slope must be abandoned to accomplish a normal landing.

C. TASK: MISSED APPROACH

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; IAP; AIM.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to missed approach procedures associated with standard instrument approaches.
2. Initiates the missed approach promptly by applying power, establishing a climb attitude, and reducing drag in accordance with the aircraft manufacturer's recommendations.
3. Reports to ATC beginning the missed approach procedure.
4. Complies with the published or alternate missed approach procedure.
5. Advises ATC or examiner anytime that the aircraft is unable to comply with a clearance, restriction, or climb gradient.
6. Follows the recommended checklist items appropriate to the go-around procedure.
7. Requests, if appropriate, ATC clearance to the alternate airport, clearance limit, or as directed by the examiner.
8. Maintains the recommended airspeed within +/-10 knots; heading, course, or bearing within +/-10°; and altitude(s) within +/-100 feet during the missed approach procedure.

D. TASK: CIRCLING APPROACH

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; IAP; AIM.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to a circling approach procedure.
2. Selects and complies with the appropriate circling approach procedure considering turbulence and wind shear and considering the maneuvering capabilities of the aircraft.
3. Confirms the direction of traffic and adheres to all restrictions and instructions issued by ATC and the examiner.
4. Does not exceed the visibility criteria or descend below the appropriate circling altitude until in a position from which a descent to a normal landing can be made.
5. Maneuvers the aircraft, after reaching the authorized MDA and maintains that altitude within +100 feet, -0 feet and a flight path that permits a normal landing on a runway. The runway selected must be such that it requires at least a 90° change of direction, from the final approach course, to align the aircraft for landing.

E. TASK: LANDING FROM A STRAIGHT-IN OR CIRCLING APPROACH

REFERENCES: 14 CFR parts 61, 91; FAA-H-8083-15; AIM.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements related to the pilot's responsibilities, and the environmental, operational, and meteorological factors, which affect a landing from a straight-in or a circling, approach.
2. Transitions at the DA/DH, MDA, or VDP to a visual flight condition, allowing for safe visual maneuvering and a normal landing.
3. Adheres to all ATC (or examiner) advisories, such as NOTAMs, wind shear, wake turbulence, runway surface, braking conditions, and other operational considerations.
4. Completes appropriate checklist items for the pre-landing and landing phase.
5. Maintains positive aircraft control throughout the complete landing maneuver.

VII. AREA OF OPERATION: EMERGENCY OPERATIONS

A. TASK: LOSS OF COMMUNICATIONS

REFERENCES: 14 CFR parts 61, 91; AIM.

Objective. To determine that the applicant exhibits adequate knowledge of the elements related to applicable loss of communication procedures to include:

1. Recognizing loss of communication.
2. Continuing to destination according to the flight plan.
3. When to deviate from the flight plan.
4. Timing for beginning an approach at destination.

B. TASK: ONE ENGINE INOPERATIVE DURING STRAIGHT-AND-LEVEL FLIGHT AND TURNS (MULTIENGINE AIRPLANE)

REFERENCES: 14 CFR part 61; FAA-H-8083-3, FAA-H-8083-15.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the procedures used if engine failure occurs during straight-and-level flight and turns while on instruments.
2. Recognizes engine failure simulated by the examiner during straight-and-level flight and turns.
3. Sets all engine controls, reduces drag, and identifies and verifies the inoperative engine.
4. Establishes the best engine-inoperative airspeed and trims the aircraft.
5. Verifies the accomplishment of prescribed checklist procedures for securing the inoperative engine.
6. Establishes and maintains the recommended flight attitude, as necessary, for best performance during straight-and-level and turning flight.
7. Attempts to determine the reason for the engine failure.
8. Monitors all engine control functions and makes necessary adjustments.
9. Maintains the specified altitude within +/-100 feet, (if within the aircraft's capability), airspeed within +/-10 knots, and the specified heading within +/-10°.
10. Assesses the aircraft's performance capability and decides an appropriate action to ensure a safe landing.
11. Avoids loss of aircraft control, or attempted flight contrary to the engine-inoperative operating limitations of the aircraft.

C. TASK: ONE ENGINE INOPERATIVE—INSTRUMENT APPROACH (MULTIENGINE AIRPLANE)

REFERENCES: 14 CFR part 61; FAA-H-8083-3, FAA-H-8083-15; IAP.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements by explaining the procedures used during an instrument approach in a multiengine aircraft with one engine inoperative.
2. Recognizes promptly, engine failure simulated by the examiner.
3. Sets all engine controls, reduces drag, and identifies and verifies the inoperative engine.
4. Establishes the best engine-inoperative airspeed and trims the aircraft.
5. Verifies the accomplishment of prescribed checklist procedures for securing the inoperative engine.
6. Establishes and maintains the recommended flight attitude and configuration for the best performance for all maneuvering necessary for the instrument approach procedures.
7. Attempts to determine the reason for the engine failure.
8. Monitors all engine control functions and makes necessary adjustments.
9. Requests and receives an actual or a simulated ATC clearance for an instrument approach.
10. Follows the actual or a simulated ATC clearance for an instrument approach.
11. Establishes a rate of descent that will ensure arrival at the MDA/DH prior to reaching the MAP with the aircraft continuously in a position from which descent to a landing on the intended runway can be made straight-in or circling.
12. Maintains, where applicable, the specified altitude within +/-100 feet, the airspeed within +/-10 knots if within the aircraft's capability, and the heading within +/-10°.
13. Sets the navigation and communication equipment used during the approach and uses the proper communications technique.
14. Avoids loss of aircraft control, or attempted flight contrary to the engine-inoperative operating limitations of the aircraft.
15. Complies with the published criteria for the aircraft approach category when circling.
16. Allows, while on final approach segment, no more than three-quarter-scale deflection of either the localizer or glide slope or GPS indications, or within +/-10° or ¾ scale deflection of the nonprecision final approach course.
17. Completes a safe landing.

D. TASK: APPROACH WITH LOSS OF PRIMARY FLIGHT INSTRUMENT INDICATORS

REFERENCES: 14 CFR part 61; FAA-H-8083-15; IAP.

Note: This approach shall count as one of the required nonprecision approaches.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements relating to recognizing if primary flight instruments are inaccurate or inoperative, and advise ATC or the examiner.
2. Advises ATC or examiner anytime that the aircraft is unable to comply with a clearance.
3. Demonstrates a nonprecision instrument approach without the use of the primary flight instrument using the objectives of the nonprecision approach TASK (AREA OF OPERATION VI, TASK A).

VIII. AREA OF OPERATION: POSTFLIGHT PROCEDURES

A. TASK: CHECKING INSTRUMENTS AND EQUIPMENT

REFERENCES: 14 CFR parts 61, 91.

Objective. To determine that the applicant:

1. Exhibits adequate knowledge of the elements relating to all instrument and navigation equipment for proper operation.
2. Notes all flight equipment for proper operation.
3. Notes all equipment and/or aircraft malfunctions and makes appropriate documentation of improper operation or failure of such equipment.

Appendix 1—Levels of Simulation Devices

TASK VS. SIMULATION DEVICE CREDIT

Examiners conducting the instrument rating practical tests with flight simulation devices should consult appropriate documentation to ensure that the device has been approved for training, testing, or checking. The documentation for each device should reflect that the following activities have occurred.

1. The device must be evaluated, determined to meet the appropriate standards, and assigned the appropriate qualification level by the National Simulator Program Manager. The device must continue to meet qualification standards through continuing evaluations as outlined in the appropriate advisory circular (AC). For airplane flight training devices (FTDs), AC 120-45 (as amended), Airplane Flight Training Device Qualifications, will be used. For simulators, AC 120-40 (as amended), Airplane Simulator Qualification, will be used.
2. The FAA must approve the device for training, testing, and checking the specific flight TASKs listed in this appendix.
3. The device must continue to support the level of student or applicant performance required by this practical test standard.

NOTE: Users of the following chart are cautioned that use of the chart alone is incomplete. The description and Objective of each TASK as listed in the body of the practical test standard, including all NOTEs, must also be incorporated for accurate simulation device use.

USE OF CHART

X Creditable.

A Creditable if appropriate systems are installed and operating.

NOTE: 1. Level 1 FTDs that have been issued a letter authorizing their use by the FAA Administrator, may continue to be used only for those TASKs originally found acceptable. Use of Level 1, 2, or 3 FTDs may not be used for aircraft requiring a type rating.

2. If a FTD or a simulator is used for the practical test, the instrument approach procedures conducted in that FTD or simulator are limited to one precision and one nonprecision approach procedure.

3. Postflight procedures means, closing flight plans, checking for discrepancies and malfunctions, and noting them on a log or maintenance form.

APPENDIX 1

TASK VS. SIMULATION DEVICE CREDIT

APPENDIX 1

FLIGHT TASK Areas of Operation	FLIGHT SIMULATION DEVICE LEVEL 1	2	3	4	5	6	7	A	B	C	D
II. Preflight Procedures											
C. Instrument Cockpit Check *	—	A	X	A	A	X	X	X	X	X	X
III. Air Traffic Control Clearances and Procedures											
A. Air Traffic Control Clearances *	—	A	X	A	A	X	X	X	X	X	X
B. Departure, En Route and Arrival Clearances *	—	—	X	—	—	X	X	X	X	X	X
C. Holding Procedures	—	—	X	—	—	X	X	X	X	X	X
IV. Flight by Reference to Instruments											
A. Basic Instrument Flight Maneuvers	—	—	X	—	—	X	X	X	X	X	X
B. Recovery from Unusual Flight Attitudes	—	—	—	—	—	—	X	X	X	X	X
V. Navigation Systems											
A. Intercepting and Tracking Navigational Systems and DME ARCS	—	A	X	—	A	X	X	X	X	X	X
VI. Instrument Approach Procedures											
A. Nonprecision Approach (NPA	—	—	X	—	—	X	X	X	X	X	X
B. Precision Approach (PA)	—	—	X	—	—	X	X	X	X	X	X
C. Missed Approach	—	—	X	—	—	X	X	X	X	X	X
D. Circling Approach	—	—	—	—	—	—	—	X	X	X	X
E. Landing from a Straight-in or Circling Approach	—	—	—	—	—	—	—	—	X	X	X
VII. Emergency Operations **											
A. Loss of Communications	—	X	X	—	—	X	X	X	X	X	X
B. One Engine Inoperative during Straight-and-Level Flight and Turns (Multiengine Airplane)	—	—	X	—	—	X	X	X	X	X	X
C. One Engine Inoperative—Instrument Approach (Multiengine Airplane)	—	—	—	—	—	—	X	X	X	X	X
D. Loss of Gyro Attitude and/or Heading Indicators	—	—	—	—	—	X	X	X	X	X	X
VIII. Postflight Procedures											
A. Checking Instruments and Equipment	—	A	X	—	A	X	X	X	X	X	X

* Aircraft required for those items that cannot be checked using a flight training device or flight simulator.
** Multiengine - Single Engine