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Flight Test Guide

Recreational Pilot Permit

Aeroplane

Sixth Edition (revised)

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FLIGHT TEST GUIDE

RECREATIONAL PILOT PERMIT - AEROPLANE

This flight test guide sets out the techniques, procedures and the marking criteria that will be used by Civil Aviation Inspectors and Pilot Examiners for the conduct of the flight test required to demonstrate the skill requirements for the issuance of the Recreational Pilot Permit - Aeroplane.

This flight test guide is intended for use by flight test candidates, flight training units, flight instructors and examiners.

Detailed descriptions and explanations of the items as numbered on the flight test form can be found by referring to the corresponding chapter number in the Flight Training Manual p and the Flight Instructor Guide published under the authority of Transport Canada.

Compliance with this flight test guide will meet the requirements of CAR Standard 428 – Schedule 2 of the Personnel Licensing and Training Standards, respecting the Conduct of Flight Tests

Definitions

‘examiner’ means a Pilot Examiner accredited under section 4.3 of Part 1 of the *Aeronautics Act* or a Civil Aviation Inspector authorized to conduct this flight test.

‘flight test item’ means a task, manoeuvre or exercise listed on the flight test report.

‘ground items’ are the planning and preparatory tasks performed prior to the pre-flight inspection of the aircraft.

‘air items’ are tasks or manoeuvres performed with the aircraft, including the pre-flight inspection, start-up, run-up, taxiing and emergency procedures.

‘proficiency’ means having a high degree of competence or skill; expertise; being prepared to handle any situation with which you might reasonably be presented during a flight.

‘soft-field’ means a grass, unpaved, improvised, soft or rough take-off or landing surface that may present variable rolling resistance or may present a risk of damage to the landing gear, if soft-field technique is not used when operating on soft or rough surfaces.

Vertical sidebars at the right margin indicate text with changes from the previous edition that may affect the performance standard expected and the evaluation of the flight test item. Text changes for the purpose of clarification or grammatical correction are not indicated.

Aussi disponible en français

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Changes in this Edition

1. Several heavy vertical lines along the right margin indicate editorial changes for increased clarity or to denote changes to the flight test.
2. Aeroplane and Equipment requirements updated.
3. ~~The number of flight test items assessed either a 1 or 2 is limited to six (6) in accordance with Advisory Circular 408-002. More than 3 flight test items assessed either a 1 or 2 will require a complete retest~~
3. The number of flight test items assessed either a 1 or 2 is limited to six (6) in accordance with Advisory Circular 408-002. More than 6 flight test items assessed either a 1 or 2 will require a complete retest

Stabilized approach – VFR (Generic Description)

On the correct final approach flight path:

- Briefings and checklists complete;
- Aircraft must be in the proper landing configuration appropriate for wind and runway conditions;
- Appropriate power settings applied;
- Maximum sink rate of 1,000 feet per minute;
- Speed within +10/-5 knots of the reference speed;
- Only small heading and pitch changes required;
- Stable by 200 feet AGL;

Note: If stability is not established by 200 feet AGL, an overshoot will be executed.

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GENERAL

Admission to Flight Test

In order to be admitted to a flight test required for the issuance of a Recreational Pilot Permit – Aeroplane, or a complete re-test, and meet the requirements of CAR 421.14, the candidate will present:

- (a) photo identification;
- (b) a valid permit, licence or a foreign pilot licence issued by a contracting state;
- (c) proof of meeting the medical standards for the Recreational Pilot Permit – Aeroplane;
- (d) a letter signed by the holder of a valid Flight Instructor Rating - Aeroplane and dated within the 30 days prior to the completion of the flight test certifying that:
 - (i) training for all of the exercises in the Flight Training Manual and the Flight Instructor Guide from Ex. 1 thru to Ex. 23 and Ex. 29, including Ex. 13 has been completed;
 - (ii) a pre-test evaluation of all required flight test exercises was completed with the candidate;
 - (iii) the candidate is considered to have reached a sufficient level of competency to complete the flight test for the issuance of the Recreational Pilot Permit – Aeroplane; and
 - (iv) the instructor recommends the candidate for the flight test.
- (e) evidence of having completed a minimum of 25 hours total flight time in aeroplanes.

Admission to a Partial Flight Test

A partial flight test must be conducted within 30 days after the date of the failed test [408.18(2)]. Prior to admission to a partial flight test, the candidate will provide the requirements of (a), (b) and (c) above, and:

- (a) a copy of the flight test report for the previously failed flight test; and
- (b) a letter, signed by the holder of a valid Flight Instructor Rating - Aeroplane, certifying that the candidate:
 - (i) has received further training on the failed flight test item(s)
 - (ii) is considered to have reached a sufficient level of proficiency to successfully complete the flight test; and
 - (iii) is recommended by the instructor for the flight test.

Letters of Recommendation

Letters of recommendation must be signed and dated by the holder of a valid Flight Instructor Rating within 30 days prior to the flight test. In the case of a candidate recommended by the holder of a Class 4 flight instructor rating; the letter must be co-signed by the supervising instructor. In the case of a partial or complete retest, the person who conducted the additional training will sign the letter of recommendation.

Aircraft and Equipment Requirements

The candidate will provide:

- (a) an aeroplane for the flight test that:
 - (i) has a flight authority pursuant to CAR 507 and that authority has no operating limitations that prohibit the performance of all required manoeuvres; and
 - (ii) meets the equipment requirements of CAR Standard 425.23 Training Aircraft Requirements – subsections (1) and (2) of the *Personnel Licensing and Training Standards*.
- (b) appropriate current aeronautical paper charts and the latest *Canada Flight Supplement*.

Liability Insurance

Pilot examiners will not accept a verbal statement from candidates indicating insurance coverage has been arranged. The candidate must provide proof of insurance indicating that the examiner is covered prior to the conduct of the flight test.

Flight Test

All of the required flight test items required by the flight test report and described in this guide must be completed and the minimum pass mark for the Recreational Pilot Permit of **42** (50%) must be achieved.

Candidates should action and complete the published “Performance Criteria” of each flight test item or exercise.

All flight tests will be conducted when weather permits safe completion of the required items, the aeroplane is airworthy and the candidate and the aircraft’s documents, as required by the Canadian Aviation Regulations, are valid. It is the sole responsibility of the examiner to make the final decision as to whether or not any portion or the entire flight test may be conducted.

Ground items **2A** to **2C** will be assessed before the flight portion of the flight test.

An informal language proficiency assessment will be carried out by the examiner during the questioning and evaluation of the ground portion of the flight test. An “Expert” or “Operational” assessment must be demonstrated to continue the flight test. In instances where a candidate is unable to demonstrate an operational level of language proficiency at the time of the flight test, the PE will assess the ground part of the flight test as a failure and will not conduct the air part of the flight test;

Note: The PE will assign a mark of “1” for the exercise “Documents and Airworthiness” and explain the situation in the “Remarks” section. Reference should be made to Advisory Circular 401-009 - The Conduct of Aviation Language Proficiency Demonstrations.

Repeated Flight Test Item

A flight test item or manoeuvre will not be repeated unless one of the following conditions applies:

- (a) **Discontinuance:** Discontinuance of a manoeuvre for valid safety reasons; i.e., a go-around or other procedure necessary to modify the originally planned manoeuvre.
- (b) **Collision Avoidance:** Examiner intervention on the flight controls to avoid another aircraft, which the candidate could not have seen due to position or other factors.
- (c) **Misunderstood Requests:** Legitimate instances when candidates did not understand an examiner’s request to perform a specific manoeuvre. A candidate’s failure to understand the nature of a specified manoeuvre being requested does not justify repeating an item or manoeuvre.
- (d) **Other Factors:** Any condition under which the examiner was distracted to the point that he or she could not adequately observe the candidate’s performance of the manoeuvre (radio calls, traffic, etc.).

Note: These provisions have been made in the interest of fairness and do not mean that instruction, practice, or the repeating of an item or manoeuvre, that was unacceptably demonstrated, is permitted during the flight test evaluation process.

Incomplete Flight Test

If the test is not completed due to circumstances beyond the candidate’s control, the subsequent flight test will include the flight test items not completed on the original flight test and will be completed within the 30 days of the original letter of recommendation. (Refer to Section 5.16 of the Pilot Examiner Manual)

The following process will apply:

- (a) a copy of the flight test report must be given to the candidate;
- (b) the flight test may be completed at a later date;
- (c) the test may be completed by the same or another examiner;
- (d) the original letter of recommendation remains valid;
- (e) flight test items already assessed will not be re-tested, but items already demonstrated during the initial flight, and repeated for the purpose of the second flight, may be re-assessed as "Below Standard" (1), if the candidate displays unsafe or dangerous flying;
- (f) the original flight test report may be used to complete the test;
- (g) the candidate is permitted to complete additional training while awaiting completion of the test.

If the initial flight test included one or two failed air items, the partial flight test for these items may be conducted during the subsequent flight test flight, after the candidate has completed all of the required items, provided:

- (a) the minimum pass mark has been achieved prior to beginning the retest of any previously failed items;
- (b) no additional items were failed during the subsequent flight test; and
- (c) a letter of recommendation for the partial flight test was received prior to the flight.

Failure of a Flight Test

Failure to obtain the minimum pass mark or the failure of any flight test item constitutes failure of the flight test. The failure of any ground item requires a complete re-test and precludes the air portion of the flight test. Ground items are not eligible for a partial flight test. The failure of one or two air items will require a partial flight test on those items, and the failure of a third air item will require a complete re-test. More than six (6) combined flight test items assessed as either "1" and/or "2" constitutes failure of the flight test and will require a complete re-test.

Following a failed flight test, the candidate will obtain a copy of the flight test report to meet the requirements for admission to a partial flight test.

If not satisfied with the outcome of the flight test, a candidate may wish to file a written complaint regarding the conduct of a flight test or the performance of an examiner with the Transport Canada Regional Office responsible for that pilot examiner. In order to succeed with a complaint, the applicant will have to satisfy Transport Canada that the test was not properly conducted. Mere dissatisfaction with the flight test result is not enough. After due consideration of the individual case, the regional Technical Team Lead responsible for Flight Training may authorize a re-test to be conducted, without prejudice (with a clean record in regard to the disputed flight test), by a Civil Aviation Inspector or alternate pilot examiner.

Partial Flight Test

Provided that the applicable pass mark has been achieved, there are no more than two failed air items and there are no more than six (6) combined exercises assessed either a "1" and/or "2", the skill requirement for licence issue may be met by completing a partial flight test of the item or items assessed "1". A Letter of Recommendation for Retest must be signed by the holder of a valid Flight Instructor Rating who conducted the remedial training.

The candidate will be required to successfully perform the air item(s) assessed as "1" on the complete flight test. Flight test items not associated with the item(s) to be retested, but repeated for the purpose of the second flight, may be re-assessed as "1" if their aim is not achieved or safety is compromised.

The partial flight test must be completed **within 30 days after the date of the failed test** [408.18(2)]. No more than one partial flight test will be allowed for each complete flight test.

Use of a Flight Training Device

For a partial flight test, and at the discretion of the examiner, a Level 3, 5 or 6 flight training device approved in accordance with CAR 606.03, Synthetic Flight Training Equipment that reproduces the aeroplane type used for the failed flight test may be used to re-test Exercise 29, Emergency Procedures.

Note: Certified FSTDs meeting the requirements of Revision 2 or Revision 3 of the Aeroplane and Rotorcraft Simulator Manual may be used for pilot testing

Complete Re-test

A complete re-test will be required in any of the following situations:

- (a) the required pass mark is not obtained during a complete flight test;
- (b) failure of any ground item;
- (c) failure of more than two air items during a complete flight test;
- (d) the combined number of flight test items assessed as either “1” and/or “2” is more than six (6);
- (e) failure of a flight test item during a partial flight test;
- (f) displaying unsafe flying or dangerous behaviour that is not linked to a lack of training or proficiency;
- (g) demonstrating a pattern of failing to use proper visual scanning techniques is displayed during the flight test; or
- (h) a partial flight test is not completed within 30 days of the date of the failed flight test.

Note: In the case of a complete re-test, the candidate should not show or submit a copy of the previously failed flight test report to the examiner.

Pre-Test Briefing

Examiners are required to brief test candidates on the following details:

- (a) **The sequence of flight test items.** There is no need for the candidate to memorize the sequence, as the examiner will give instructions for each item.
- (b) **If in doubt -- ask!** Candidates who do not clearly understand what they are being asked to do should feel free to ask. It may be that the examiner was not clear in giving instructions.
- (c) **Who is pilot-in-command?** The examiner will be the pilot-in-command (PIC), pursuant to CAR sections 401.03 and 401.19 – *Student Pilot Permit - Privileges*, as amended in 2014. In all cases, the examiner reserves the right to exercise all reasonable duty of care to ensure safe flight by intervening or taking control of an aircraft when any action or lack of action by the candidate seriously jeopardizes flight safety or if a breach of regulation is imminent.
 - (i) Pursuant to the Aeronautics Act: “pilot-in-command” means, in relation to an aircraft, the pilot having responsibility and authority for the operation and safety of the aircraft during flight time.
 - (ii) The responsibility and authority of an examiner, while conducting any flight test, is illustrated by the following non-exhaustive list. An examiner:
 - (A) determines the route of the aircraft;
 - (B) establishes the conditions for the takeoff and landing;
 - (C) directs the candidate when conducting air exercises;
 - (D) manipulates the flight and power controls at their own discretion when preparing for certain exercises;

- (E) intervenes, when necessary and at any time, to ensure the safe continuation of the flight;
 - (F) makes decisions with respect to the continuation or termination of the flight.
- (iii) If the examiner performs the duties listed in the short list above, by default the examiner effectively is the Pilot-in-Command. In any case, the examiner is the most qualified on board and may be held responsible for any negligence or for not exercising all reasonable duty of care as any other reasonable person in the same position would have exercised.
- (d) **Who will do what in the event of an actual emergency?** Although the examiner is PIC, the candidate, who is role-playing as a PIC with their first passenger, shall provide a briefing to the examiner detailing the actions to be taken by the candidate and examiner in the event of an actual emergency. The examiner may question or supplement as required to ensure the highest possible level of safety in the event of an actual emergency.
 - (e) **How to transfer control.** There should never be any doubt as to who is flying the aircraft, so proper transfer of control through the words "You have control" and "I have control" is expected during a flight test. A visual check is recommended to verify that the exchange has occurred.
 - (f) **Ground References.** Intended touchdown zones and specific touchdown points. For the short or soft field approach and landing, the examiner will clearly specify the simulated surface conditions, obstacles on approach, runway threshold and length of surface available to the candidate.
 - (g) **Method of simulating emergencies.** What method will be used? Verbal? Engine failures will only be simulated in accordance with the manufacturer's recommendations or, in their absence, by closing the throttle or by reducing power to flight idle.
- Note:** The practice of closing fuel valves, shutting off magneto switches or pulling of circuit breakers will not be used during a flight test.

Flight Management

Flight management refers to the effective use of all available resources, including working with such groups as dispatchers, other crewmembers, maintenance personnel, and air traffic controllers. Poor performance of an exercise or task can often be explained by weaknesses in flight management competencies.

Problem Solving and Decision Making

- (a) anticipates threats far enough in advance to avoid crisis reaction
- (b) uses effective decision-making process
- (c) makes appropriate inquiries
- (d) prioritizes tasks to gain maximum information input for decisions
- (e) makes effective use of all available resources to make decisions
- (f) considers "downstream" consequences of the decision being considered

Situational Awareness

- (a) actively monitors weather, aircraft systems, instruments, ATC communications
- (b) avoids "tunnel vision" - awareness that factors such as stress can reduce vigilance
- (c) stays "ahead of the aircraft" in preparing for expected or contingency situations
- (d) remains alert to detect subtle changes in the environment

Communication

- (a) provides thorough briefings
- (b) asks for information and advice
- (c) communicates decisions clearly
- (d) asserts one's position appropriately

Workload Management

- (a) organizes cockpit resources well
- (b) manages errors effectively
- (c) recognizes overload in self
- (d) eliminates distractions during high workload situations
- (e) maintains ability to adapt during high workload situations

Airmanship

The candidate's airmanship will be assessed along with other factors in determining the mark awarded for each item. Items such as looking out for other aircraft, use of checklists, consideration for other aircraft on the ground and in the air, choice of run-up areas, choice of runways and clearing the engine during prolonged glides will be assessed. The candidate will be expected to demonstrate good airmanship and complete accurate checks on a continuing basis.

Errors

Error: means an action or inaction by the flight crew that leads to a variance from operational or flight crew intentions or expectations.

Minor Error

A minor error is an action or inaction that is inconsequential to the completion of a task, procedure or manoeuvre, even if certain elements of the performance vary from the recommended best practices.

Major Error

A major error is an action or inaction that can lead to an undesired aircraft state or a reduced safety margin, if improperly managed; or an error that does not lead to a safety risk, but detracts measurably from the successful achievement of the defined aim of a sequence/item:

Critical Error

A critical error is an action, inaction that is mismanaged and consequently leads to an undesired aircraft state or compromises safety such as:

- Non-compliance with CARS or non-adherence to mandated standard operating procedures;
- Repeated improper error management or uncorrected and unrecognized threats that risk putting the aircraft in an undesired state; or
- Repeated major errors or the non-performance of elements prescribed in the *Performance Criteria** that are essential to achieving the *Aim** of a test sequence/item.

Deviations

Deviation: means a variance in precision with respect to a specified limit published for a test sequence/item, as a result of pilot error or faulty handling of the aircraft.

Minor Deviation

A minor deviation is a deviation that does not exceed a specified limit:

Major Deviation

A major deviation is a deviation that exceeds a specified limit or repeated minor deviations without achieving stability:

Critical Deviation

A critical deviation is a major deviation that is repeated, excessive or not corrected, such as:

- Repeated non-adherence to specified limits;
- Not identifying and correcting major deviations; or
- More than doubling the specified value of a limit.

4-POINT MARKING SCALE

When applying the 4-point scale, award the mark that best describes the weakest element(s) applicable to the candidate's performance of the particular test sequence/item demonstrated.

4	Performance is well executed considering existing conditions: • Aircraft handling is smooth and positive with a high level of precision. • Technical skills indicate a thorough knowledge of procedures, aircraft systems, limitations and performance characteristics. • Situational awareness is indicated by continuous anticipation and vigilance. • Flight management skills are exemplary and threats are consistently anticipated, recognized and well managed. • Safety margins are maintained through consistent and effective management of aircraft systems and mandated operational protocols.
3	Performance is observed to include minor errors: • Aircraft handling with appropriate control input includes minor deviations. • Technical skills indicate an adequate knowledge of procedures, aircraft systems, limitations and performance characteristics to successfully complete the task. • Situational awareness is adequately maintained as candidate responds in a timely manner to cues and changes in the flight environment to maintain safety while achieving the aim of the sequence/item. • Flight management skills are effective. Threats are anticipated and errors are recognized and recovered. • Safety margins are maintained through effective use of aircraft systems and mandated operational protocols.
2	Performance is observed to include major errors: • Aircraft handling is performed with major deviations and/or an occasional lack of stability, over/under control or abrupt control input. • Technical skills reveal deficiencies either in depth of knowledge or comprehension of procedures, aircraft systems, limitations and performance characteristics that do not prevent the successful completion of the task. • Situational awareness appears compromised as cues are missed or attended too late or the candidate takes more time than ideal to incorporate cues or changes into the operational plan. • Flight management skills are not consistent. Instrument displays, aircraft warnings or automation serve to avert an undesired aircraft state by prompting or remedying threats and errors that are noticed late. • Safety margins are not compromised, but poorly managed.
1	Performance is observed to include critical errors or the <i>Aim</i> (objective) of the test sequence/item is not achieved: • Aircraft handling is performed with critical deviations and/or a lack of stability, rough use of controls or control of the aircraft is lost or in doubt. • Technical skills reveal unacceptable levels of depth of knowledge or comprehension of procedures, aircraft systems, limitations and performance characteristics that prevent a successful completion of the task. • Lapses in situational awareness occur due to a lack of appropriate scanning to maintain an accurate mental model of the situation or there is an inability to integrate the information available to develop and maintain an accurate mental model. • Flight management skills are ineffective, indecisive or noncompliant with mandated published procedures and/or corrective countermeasures are not effective or applied. • Safety margins are compromised or clearly reduced.

Flight Test Results

The *Privacy Act* protects the privacy of individuals with respect to personal information about themselves held by a government institution. A flight test measures the performance of the candidate for the flight test, the examiner conducting the flight test, the instructor who recommended the candidate and, through identification of the Flight Training Unit responsible for the training, the performance of the Chief Flight Instructor of that unit. All of these are identified on the flight test report.

Personal information may be disclosed in accordance with Section 8(2)(a) of the *Act*, which allows disclosure... "for the purpose for which the information was obtained or compiled by the institution or for a use consistent with that purpose". The purpose for which flight test information is obtained is to ensure the safety of aviation in Canada. The specific purposes are to measure whether the candidate meets the minimum skill standard for the licence or rating, whether the recommending instructor is performing competently as an instructor, whether the examiner is conducting the test in accordance with the standards, and whether the Flight Training Unit is performing in accordance with the general conditions of the operator certificate.

In accordance with 8(2)(a) of the *Privacy Act*, a copy of the flight test report will be given to the candidate for a flight test and a copy will be retained by the examiner who conducted the flight test. A copy may also be given to the instructor who recommended the candidate for the flight test and to the Chief Flight Instructor responsible for the quality of flight training at the Flight Training Unit where the training was conducted. Specific information about the results of a flight test will not be given by Transport Canada to anyone but the individuals named on the flight test report, except in accordance with the *Privacy Act*.

Assessment of Flight Test Performance

The "*Performance Criteria*" section of each flight test item prescribes the marking criteria. These criteria assume no unusual circumstances as well as operation of the aeroplane in accordance with the manufacturer's specifications, recommended speeds and configurations in the Pilot's Operating Handbook/Aircraft Flight Manual (POH/AFM) or other approved data.

Candidates should action and complete the published "Performance Criteria" of each flight test item or exercise.

Throughout the flight test, the candidate 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 written checklist, while accomplishing the elements of an "*Aim*", would be either unsafe or impractical. 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. It is acceptable for certain items to be verified from memory, in which case, a review of the checklist is expected after the elements have been accomplished.

Consideration will be given to unavoidable deviations from the published criteria due to weather, traffic or other situations beyond the reasonable control of the candidate. To avoid the need to compensate for such situations, tests should be conducted under normal conditions, whenever possible.

FLIGHT TEST ITEMS

Ex. 2 Aeroplane Familiarization and Preparation for Flight

A. Documents and Airworthiness (Ground Item)

Aim

To correctly assess the validity of documents required on board and, from these documents, determine that the aircraft is airworthy for the proposed flight.

Description

The candidate must determine the validity of all documents required to be carried on board the aeroplane and determine that required maintenance certifications have been completed.

Performance Criteria

Assessment will be based on the candidate's competency to:

- (a) ensure that flight authorization is confirmed and encompasses the requirements of the intended flight in accordance with the applicable operational control system;
- (b) determine if the documents required on board are valid;
- (c) determine from the aircraft documents, including the Aircraft Journey Logbook, that the maintenance release stipulates aeroplane serviceability and that no service or inspection requirements will come due during the period of the intended flight;
- (d) determine the number of flying hours remaining before the next service or maintenance task;
- (e) ensure that any conditions or limitations on the maintenance release can be complied with; and
- (f) determine the impact of deferred defects on aeroplane operations for the intended flight.
- (g) explain the process to follow if any defects are discovered during a flight.

Note: There is no requirement for the candidate to demonstrate knowledge of the Maintenance Control Manual of the FTU or the Approved Maintenance Schedule for the aircraft type use.

B. Aeroplane Performance (Ground Item)

Aim

To understand the recommended operating procedures, performance capabilities and approved limitations of the aeroplane being used for the flight test.

Description

The candidate will be required to demonstrate practical knowledge of recommended operating procedures, performance capabilities and limitations for the aeroplane to be used on the flight test. Essential performance speeds will be quoted from memory. Other aeroplane performance data, such as static take-off power RPM, may be determined from the POH/AFM.

Performance Criteria

Assessment will be based on the candidate's competency to:

- (a) state from memory and explain the practical application for the following speeds:
 - (i) best angle of climb speed (VX);
 - (ii) best rate of climb speed (VY);
 - (iii) manoeuvring speed (VA); and

- (b) calculate, for the proposed flight the take-off distance required to clear a 50 foot or existing obstacle;
- (c) calculate, for the proposed flight the landing distance required to clear a 50 foot or existing obstacle; and
- (d) the available flight time with the fuel load and power settings proposed for the flight.

C. Weight and Balance, Loading (Ground Item)

Aim

To correctly complete weight and balance calculations for the aeroplane used for the flight test.

Description

The candidate will be required, using actual weights, to apply the approved weight and balance data and complete accurate computations for an assigned practical load requirement that addresses all or most of the passenger and baggage stations applicable to the aeroplane to be used in the test, including take-off weight and landing weight. If a loading graph or computer is available with the aeroplane, it may be utilized.

Knowledge of weight and balance graphs and envelopes, and the effect of various centers of gravity locations on the aeroplane flight characteristics will be demonstrated. Practical knowledge of how to correct a situation in which the center of gravity is out of limits or in which the gross weight has been exceeded will be demonstrated.

Performance Criteria

Assessment will be based on the candidate's competency to:

- (a) determine if the take-off and landing weights and centers of gravity in each case are within permissible limits;
- (b) demonstrate practical knowledge of how to correct a situation in which the center of gravity is out of limits and/or in which the gross weight is exceeded; and
- (c) explain the effect of various center of gravity locations on aeroplane flight characteristics.

D. Pre-Flight Inspection (Air Item)

Aim

To complete internal and external checks in accordance with the POH/AFM and demonstrate practical knowledge of the aircraft to determine that the aeroplane is in a safe condition for the intended flight.

Description

The candidate will determine that the aeroplane is ready for the intended flight.

All required equipment and documents will be located and, so far as can be determined by pre-flight inspection, the aeroplane will be confirmed to be airworthy. Visual checks for fuel quantity, proper grade of fuel, fuel contamination and oil level will be carried out in accordance with the POH/AFM. If the aircraft design precludes a visual check, fuel chits, fuel logs or other credible procedures may be used to confirm the amount of fuel actually on board.

After the candidate has completed the pre-flight inspection, questions relating to the flight test aircraft will be asked. The candidate should be able to explain what appropriate action would be taken if an unsatisfactory item were detected or described by the examiner during the pre-flight inspection. The candidate should demonstrate knowledge of the consequences if such items were undetected.

Note: The external and internal checks must at least cover all of the items specified by the manufacturer.

The candidate will conduct an oral passenger safety briefing. Should the candidate omit the passenger safety briefing, the examiner will ask the candidate to provide a briefing.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) use an orderly procedure to inspect the aeroplane including at least those items listed by the manufacturer or aeroplane owner;
- (b) confirm that there is sufficient fuel and oil for the intended flight;
- (c) verify that the aeroplane is in condition for safe flight;
- (d) describe the appropriate action to take for any unsatisfactory item detected or described by the examiner;
- (e) identify and verify the location and security of baggage and required equipment;
- (f) organize and arrange material and equipment in a manner that makes the items readily available;
- (g) perform an effective passenger safety briefing that will include:
 - (i) use of seat belts and shoulder harnesses;
 - (ii) the location and use of emergency exits;
 - (iii) emergency locator transmitter, fire extinguisher;
 - (iv) passenger considerations for aircraft evacuation;
 - (v) action to take in the event of an emergency landing
 - (vi) smoking limitations
 - (vii) items specific to the aeroplane type being used
 - (viii) other items for use in an emergency.

E. Engine Starting and Run-up, Use of Checklists

Aim

To complete engine start, warm-up, run-up, correctness of control movements and system checks in accordance with the checklists or placards provided by the aircraft manufacturer or owner, completing at least those items in the POH/AFM to determine that the aeroplane is airworthy and ready for flight.

Description

The candidate is expected to use recommended procedures and good airmanship for engine starting, warm-up, run-up and checking of aeroplane systems and equipment in accordance with the checklists or placards provided by the aircraft manufacturer or owner, completing at least those items in the POH/AFM to determine that the aeroplane is airworthy and ready for flight. The candidate will be asked to demonstrate or explain how to correct any unsatisfactory condition encountered or specified by the examiner.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) demonstrate an awareness of other persons and property before and during engine start;
- (b) use the appropriate checklist provided by the manufacturer or aeroplane owner;
- (c) accurately complete the engine and aeroplane systems checks;
- (d) check flight controls for freedom of operation and correct movement; and
- (e) take appropriate action with respect to unsatisfactory conditions.

Ex 3 Systems / Ancillary Controls

Aim

To operate the installed aircraft systems in accordance with the POH/AFM or manual supplements.

Description

The candidate will be expected to demonstrate practical knowledge of the operation of systems installed on the aeroplane being used for the flight test. Use of these systems will be evaluated both on the ground and in the air.

Performance Criteria

Assessment will be based on the candidate's proficiency to operate the aeroplane systems in accordance with the POH/AFM and explain the operation of two (2) of the following systems, as specified by the examiner:

- (a) primary flight controls and trim
- (b) flaps
- (c) carburetor heat
- (d) mixture controls
- (e) fuel or oil system
- (f) electrical system
- (g) flaps
- (h) avionics suite
- (i) pitot-static system, vacuum/pressure system and associated flight instruments
- (j) heater and environmental system
- (k) any other systems unique to the aeroplane.

Ex. 4 Taxiing

Aim

To safely manoeuvre the aeroplane safely and avoid unnecessary interference with the movement of other traffic.

Description

The candidate will be expected to taxi the aircraft to and from the runway in use and as otherwise required during the test. Provided that traffic and other conditions permit, the candidate will be expected to taxi along taxiway centrelines where they exist. The candidate will be expected to position the flight controls appropriately for wind conditions. During calm wind conditions, the examiner will specify a wind speed and direction in order to test this proficiency.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) perform a brake check;
- (b) effective use of brakes, not dragging brakes while taxiing;
- (c) position flight controls as appropriate for the actual or simulated wind conditions;
- (d) demonstrate proficiency by maintaining correct and positive aeroplane control.
- (e) safely manoeuvre the aeroplane, considering other traffic on aprons and manoeuvring areas;
- (f) use appropriate taxiing speeds;

- (g) maintain a safe distance from other aeroplanes, obstructions and persons;
- (h) adhere to local taxi rules, procedures and Air Traffic Control clearances and instructions;
- (i) confirm the correct functioning of the flight instruments;
- (j) accomplish the applicable checklist items and perform recommended procedures;
- (k) identify and correctly interpret airport, taxiway and runway signs, markings and lighting;
- (l) after landing, clear the runway/landing area and taxi to suitable parking/refuelling area;
- (m) maintain constant vigilance and aeroplane control during taxi operation;
- (n) park and secure the aeroplane properly, considering existing or forecast conditions.

Ex. 11 Slow Flight

Aim

To establish the aircraft in slow flight on the backside of the power curve, where more power is needed to fly slower, as indicated by intermittent stall warnings or aerodynamic buffet, maintain flight control and to manoeuvre near that speed while preventing a stall, and to safely recover promptly and smoothly to normal flight on command of the examiner.

Description

At an operationally safe altitude that would allow recovery from an inadvertent stall at or above 2,000 feet AGL or the minimum altitude recommended by the manufacturer, whichever is higher, the candidate will establish and manoeuvre the aircraft in slow flight within 5 to 10 knots of the stall speed. Airspeed may be increased slightly during a turn or in turbulent conditions. A slight increase in airspeed while turning or in turbulence is expected as the stall speed increases in these conditions.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) complete appropriate safety precautions before entering slow flight;
- (b) maintain an effective lookout;
- (c) establish and maintain the aeroplane in slow flight as indicated by intermittent stall warning or aerodynamic buffeting, with an aircraft configuration appropriate for that speed range;
- (d) demonstrate coordinated straight and level flight and a level turn, with an angle of bank of 15 degrees in slow flight;
- (e) prevent a stall;
- (f) maintain specified altitudes (± 100 feet), headings ($\pm 10^\circ$) and angles of bank ($\pm 5^\circ$);
- (g) roll out on specified headings ($\pm 10^\circ$); and
- (h) recover promptly and smoothly to normal flight on command of the examiner.

Note: Avoid prolonged periods in slow flight to prevent possible overheating of some engine components.

Ex. 12 Stall

Aim

To recognize indications of the approach to stalls, intentionally enter a full stall, and safely execute a positive and smooth recovery to normal flight.

Description

The stall maneuver shall be entered with approximately 50% of the available power at a safe entrance altitude allowing an exit at the minimum altitude recommended by the manufacturer or at a minimum height of 2,000 feet above ground, whichever is the greater. The stall can be entered from various flight conditions, e.g. slow flight, stall with cross controls, uphill turn, tight turn, or go-around (full power) simulation of an approach with full flaps in a landing configuration. During power-on stalls, some wing drop is acceptable, but adequate control of the yaw with the rudder is mandatory. The examiner will specify the configuration of the aircraft for the stall.

Note: Candidates should have the proficiency to recover from an unintentional incipient spin, should one develop as a result of any stall. Spin recovery training should have been covered in accordance with the Flight Training Manual and the Flight Instructor Guide.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) complete appropriate safety precautions before entering a stall;
- (b) establish the specified configuration;
- (c) transition smoothly to a pitch attitude that will induce a stall;
- (d) **recognize and announce** the onset of the stall by identifying the stall warning, the first aerodynamic buffeting or decay of control effectiveness;
- (e) stall the aeroplane;
- (f) maintain directional control;
- (g) smoothly recover using control applications in the correct sequence by promptly reducing the angle of attack to break the stall and leveling the wings ;
- (h) avoid a secondary stall and add full power and return to a cruise attitude;
- (i) return to the altitude, heading and airspeed specified by the examiner.

Ex. 14 Spiral

Aim

To recognize a spiral dive and safely execute a smooth recovery to straight and level flight.

Description

The examiner will initiate this manoeuvre from an over-banked steep turn or an incorrect spin entry. Control will be given to the candidate when the spiral is established. On assuming control the candidate will be expected to commence recovery immediately.

Recovery will be completed at a height specified by the manufacturer, or no less than 2,000 feet above ground, whichever is greater.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) promptly and smoothly recover using coordinated control application in the proper sequence; and
- (b) return smoothly to straight and level flight without excessive loss of altitude; and
- (c) avoid exceeding any operating limitation of the aeroplane.

Ex. 15 Slipping

Aim

To demonstrate safe and effective slipping manoeuvres to increase a rate of descent or for crosswind landing conditions.

Description

The candidate will be required to demonstrate a forward slip or a slipping turn to lose altitude. Slipping may be assessed during any of the landing approaches, including the precautionary or forced landing approaches.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) smoothly establish an effective slip;
- (b) maintain a slip appropriate to the flight profile and crosswind conditions, where they exist;
- (c) in the case of a forward slip, maintain the intended flight path. and
- (d) recover smoothly to coordinated flight;

NOTE: Any significant skidding manoeuvre is unacceptable.

Ex. 16 Takeoff

The candidate will demonstrate:

- (a) a normal takeoff; and
- (b) a short-field takeoff, or a soft-field takeoff.

Where practicable, at least one of the takeoffs will be based on the previously calculated performance. If possible at least one of the takeoffs should be completed under crosswind conditions.

For the purpose of this exercise, the examiner may specify simulated conditions for the takeoff such as surface conditions, obstacles to be cleared and available runway length. ATC instructions and clearances must be complied with, where they are applicable.

Note 1: The candidate must be able to explain the operational necessity for any variation from recommended speeds, e.g. gusty or crosswind conditions.

Note 2: Prior to the takeoff, in the interest of better cockpit co-ordination, the candidate will complete a crew briefing with the examiner on the intended departure procedure, takeoff considerations, noise abatement procedures and procedures to be used in the event of an actual engine failure during takeoff and initial climb.

A. Normal Takeoff

Aim

To safely conduct a normal take off using the correct procedure and technique for the actual or simulated wind conditions, runway surface and length, and to assess the possibility of further conditions such as wind shear and wake turbulence.

Description

The candidate will conduct a takeoff from a prepared surface and will apply the recommended techniques and procedures for a normal takeoff.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) review passenger safety (Example; seat belt secure, door locked);
- (b) complete appropriate checklists;
- (c) respect ATC clearances and instructions;
- (d) specify a GO/NO GO decision point to the examiner;
- (e) position the flight controls and configure the aeroplane for the existing conditions;
- (f) check for traffic, taxi into the take-off position, and align the aeroplane on the runway centerline;
- (g) advance the throttle smoothly to take-off power;
- (h) confirm that take-off power has been achieved;
- (i) maintain directional control during the take-off roll;
- (j) rotate at the recommended airspeed (+10/-5 knots);
- (k) accelerate to and maintain recommended or briefed climb speed (+10/-5 knots);
- (l) maintain take-off power to a safe height, then, where applicable, set climb power;
- (m) eliminate drift and track along runway centerline and extended centerline;
- (n) comply with noise abatement procedures; and
- (o) complete appropriate checks.

B.1 Short-Field Takeoff

Aim

To safely take off from a short field, using the correct procedure and technique for the actual or simulated wind conditions, runway length and obstacles to be cleared, and assess the possibility of further conditions such as wind shear and wake turbulence.

Description

For the purpose of this exercise, the examiner will specify simulated conditions, available runway length and obstacles to be cleared for the short-field takeoff. The candidate is expected to use the maximum performance takeoff technique recommended in the POH/AFM for the aeroplane type used.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) review passenger safety (Example; seat belt secure, door locked);
- (b) complete appropriate checklists;
- (c) respect ATC clearances and instructions;
- (d) specify a GO/NO GO decision point to the examiner;
- (e) position the flight controls and flaps for the existing conditions;
- (f) check for traffic, taxi into position for maximum utilization of available take-off distance;
- (g) advance the throttle smoothly to take-off power while holding brakes, or as specified by the manufacturer;
- (h) confirm static take-off power has been achieved;
- (i) maintain directional control during the take-off roll;
- (j) rotate at the recommended airspeed (+10/-5 knots);
- (k) accelerate to and maintain recommended climb speed (+10/-5 knots);
- (l) retract flaps, where applicable, at a safe height;

- (m) maintain take-off power to a safe height, then, where applicable, set climb power;
- (n) maintain proper drift correction in the climb; and
- (o) complete appropriate checks.

Note: The accuracy of lateral positioning on the runway during takeoffs and landings will be assessed in accordance with the following criteria:

- 4 - The fuselage remains over the centerline of the runway/landing surface;
- 3 - The wing remains over the centerline of the runway/landing surface;
- 2 - The aeroplane is at or drifts to a position where the centerline of the runway/landing surface is beyond the wing tip;
- 1 - The aeroplane's longitudinal axis is at or drifts to more than halfway from the centerline of the runway/landing surface towards the edge of the pavement/prepared surface.

B.2 Soft-Field Takeoff

Aim

To safely take off from a soft or unprepared surface using the correct procedure and technique for the actual or simulated wind conditions, runway surface and length, and to assess the possibility of further conditions such as wind shear and wake turbulence.

Description

For the purpose of this exercise, the examiner will specify simulated conditions for the soft-field takeoff such as surface conditions, obstacles to be cleared and available runway length. The candidate is expected to use the soft-field takeoff technique described in the Flight Training Manual or as recommended in the POH/AFM for the aeroplane type used.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) review passenger safety (Example; seat belt secure, door locked);
- (b) complete appropriate checklists;
- (c) respect ATC clearances and instructions;
- (d) position the flight controls and flaps for the existing conditions;
- (e) specify a GO/NO GO decision point to the examiner;
- (f) check for traffic, taxi onto the take-off surface at a safe speed and align the aeroplane, without stopping, while advancing the throttle smoothly to take-off power;
- (g) confirm take-off power has been achieved;
- (h) establish and maintain a pitch attitude that will effectively and efficiently transfer the weight of the aeroplane from the wheels to the wings;
- (i) maintain directional control during the take-off roll;
- (j) lift off at minimum possible airspeed;
- (k) remain in ground effect after takeoff while accelerating to recommended climb speed;
- (l) maintain recommended climb speed (+10/-5 knots);
- (m) retract flaps, where applicable, at a safe height;
- (n) maintain take-off power to a safe height, then, where applicable, set climb power;
- (o) maintain proper drift correction in the climb; and
- (p) complete appropriate checks.

Ex. 17 Circuit

Aim

To operate the aeroplane in a safe manner in the vicinity of a controlled and/or uncontrolled aerodrome.

Description

The candidate will demonstrate correct circuit procedures for the aerodrome where the test is conducted, including departure and joining while maintaining separation from other aircraft.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) fly an accurate circuit maintaining correct position and separation from other aircraft;
- (b) comply with published circuit entry and departure procedures;
- (c) comply with published and established traffic patterns;
- (d) correct for wind drift to maintain proper ground track;
- (e) remain oriented with the runway/landing area in use;
- (f) maintain circuit altitude (± 100 feet) and an appropriate airspeed; and
- (g) complete appropriate checklists.

Ex. 18 Approach and Landing

The candidate will be required to demonstrate:

- (a) a normal landing;
- (b) a short-field landing or a soft-field landing; and
- (c) an overshoot.

Assessment of approaches and landings will be based on the candidate's proficiency to select the proper approach profile for the actual or simulated conditions. **Unless strong crosswinds or gusts are present, all landings will be executed with full flap.** Where practicable, at least one of the landings will be based on the previously calculated performance. If possible, at least one of the landings should be completed under crosswind conditions.

Note 1: The candidate must be able to explain the necessity for any variation from recommended speeds, e.g. gusty or crosswind conditions.

Note 2: For all approaches towards an actual or projected landing, a stabilized approach in accordance with the description of a "Stabilized Approach – VFR" is expected. Approaches that are unstable below 200 feet AGL are indicative of a major error

A. Normal Approach and Landing

Aim

To safely execute a normal approach and landing as recommended by the POH/AFM or the techniques in the Flight Training Manual.

Description

The candidate is expected to conduct a normal approach and landing using the correct recommended procedure and technique for the actual wind conditions, landing surface and length or those specified by the examiner, to assess the possibility of further conditions such as wind shear and wake turbulence.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) review passenger safety (Example; seat belt secure, door locked);
- (b) consider the wind conditions, landing surface and obstructions;
- (c) select a specific touchdown point;
- (d) establish the recommended approach and landing configuration;
- (e) maintain a stabilized approach at the recommended airspeed, or in its absence, 1.3 V_{SO} (+10/-5 knots);
- (f) maintain crosswind correction and directional control throughout the approach and landing;
- (g) make smooth, timely and correct control applications during the approach and landing;
- (h) touch down, in the first one third (1/3) of the runway, in accordance with the POH/AFM or best accepted practice for the aeroplane type;
- (i) touch down with no drift and with the longitudinal axis aligned with and within 15 feet of the centre of the landing surface;
- (j) apply brakes, as necessary, without excessive lockup or skidding; and
- (k) complete appropriate checks.

B. Short-Field and Soft-Field Landings

Aim

To safely execute a short-field approach over an actual or simulated obstacle and land on a specified touchdown point with a degree of accuracy, using the technique recommended by the POH/AFM or to execute a soft-field landing using the techniques in the Flight Training Manual.

Description

For the short or soft-field approach and landing, the examiner will clearly specify the simulated surface conditions, obstacles on approach, landing threshold and length of surface available to the candidate. Should the candidate realize, prior to the landing flare, that a short-field landing couldn't be achieved in the intended touchdown zone; an overshoot for a second attempt is acceptable. For soft-field landings, the candidate is expected to use the technique described in the Flight Training Manual and maximum performance (short-field) landings will be executed as recommended in the POH/AFM for the aeroplane type used.

B.1 Short-Field Approach and Landing

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) review passenger safety (Example; seat belt secure, door locked);;
- (b) consider the wind conditions and actual or simulated landing surface and obstructions;
- (c) select the most suitable touchdown zone and specify a touchdown point in consideration of the obstacles to be cleared;
- (d) execute the initial approach using recommended airspeeds and configurations;
- (e) fly a stabilized final approach descent profile that clears any actual or simulated obstacle, and results in the appropriate configuration and one of the following speeds at a height of 50 feet above the threshold:
 - (i) the recommended final approach speed (+10/-5 knots); or
 - (ii) 1.3 V_{SO} (+10/-5 knots); or

- (iii) the minimum safe speed for existing conditions e.g. gusty or crosswind conditions.
- (f) maintain crosswind correction and directional control throughout the approach and landing;
- (g) make smooth, timely and correct control applications during the landing flare and touchdown;
- (h) touch down at the specified touchdown point (+200/–50 feet) in accordance with the POH/AFM or best accepted practice for the aeroplane type;
- (i) touch down with no side drift and with the longitudinal axis aligned with and over the runway centerline/landing path;
- (j) apply brakes, without excessive lockup or skidding and stop safely in the shortest distance; and
- (k) complete appropriate checks.

Note: Abrupt decent after clearing an obstacle will be assessed as a “2” or less. (“Chop and Drop” is not stable.)

B.2 Soft-Field Approach and Landing

Performance Criteria

Assessment will be based on the candidate’s proficiency to:

- (a) review passenger safety (Example; seat belt secure, door locked);;
- (b) consider the wind conditions, obstructions and actual or simulated landing surface;
- (c) select the most suitable touchdown zone in the first one third (1/3) of the runway/landing surface;
- (d) execute the initial approach using recommended airspeeds and configurations;
- (e) fly a stabilized final approach profile that clears any actual or simulated obstacle, and results in the appropriate configuration and one of the following speeds at a height of 50 feet above the threshold:
 - (i) the recommended final approach speed (+10/–5 knots); or
 - (ii) 1.3 V_{SO} (+10/–5 knots); or
 - (iii) the minimum safe speed for existing conditions e.g. gusty or crosswind conditions;
- (f) maintain crosswind correction and directional control throughout the approach and landing;
- (g) touch down using power as necessary to achieve the landing attitude for the slowest possible touch down on the main wheels, while preventing nose wheel or tail cone contact with the ground;
- (h) touch down in the first one third (1/3) of the runway, with no side drift and with the longitudinal axis aligned with and over the runway centerline/landing path;
- (i) keep the nose wheel off the ground as long as possible with appropriate use of power and elevator control, while decelerating in consideration of the remaining length of available runway; and
- (j) complete appropriate checks.

C. Overshoot

Aim

To safely execute an overshoot as recommended by the POH/AFM or published best practices.

Description

The overshoot may be called for by the examiner and assessed from any of the landing approaches, the forced landing or precautionary landing.

Performance Criteria

Assessment will be based on the candidate’s proficiency to:

- (a) overshoot on command or make a timely decision to discontinue the approach to landing;

- (b) promptly and smoothly apply maximum allowable power and establish the pitch attitude that will stop the descent;
- (c) retract flaps in stages or as recommended by the manufacturer;
- (d) retract the landing gear (where applicable) after a positive rate of climb is established, or as recommended by the manufacturer;
- (e) accelerate to and maintain the recommended climb speed (+10/–5 knots);
- (f) maintain maximum allowable power to a safe manoeuvring altitude then, where applicable, set climb power; and
- (g) complete the appropriate checks.

Ex. 21 Precautionary Landing

Aim

To safely evaluate an unfamiliar aerodrome or landing area as a prospective place to land.

Description

The examiner will assign a suitable landing area. The candidate will determine the landing path and the suitability of the landing surface and use a planned procedure to fly an accurate approach. While an actual landing may not be required, the final approach flown should be such that a successful landing could have been accomplished in the pre-selected touchdown zone.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) review passenger safety (Example; seat belt secure, door locked);;
- (b) comply with circuit procedures at an aerodrome;
- (c) select the most suitable touchdown zone within the landing area considering wind conditions, landing surface and obstructions;
- (d) establish circuits at an appropriate distance from the runway or airstrip;
- (e) configure and trim the aeroplane for the low-level inspection at an airspeed adjusted for existing conditions, as recommended in the POH/AFM, while in straight and level flight;
- (f) maintain a stabilized approach and recommended airspeed (+10/–5 knots);
- (g) overfly the landing area in stabilized level flight at a safe height above obstacles for both the approach and departure and an airspeed that will permit an effective assessment of surface conditions ;
- (h) determine the suitability of the intended landing surface;
- (i) indicate the type of landing to be used and perform a final approach in a manner that would permit touch down within the selected touchdown zone;
- (j) maintain crosswind correction and directional control throughout the approach and landing; and
- (k) complete appropriate checks.

Note: The candidate must communicate the intended height for the low-level inspection and explain the operational necessity for any variation from recommended speeds, such as for gusty or crosswind conditions.

Ex. 22 Forced Landing

Aim

To plan, manage and safely carry out a successful approach in the event of an engine failure to a selected touchdown zone in the first 1/3 of a suitable landing area.

Description

Engine failure will be simulated from 3,000 feet AGL without advance warning by the examiner by closing the throttle to idle or by bringing the power lever to flight idle and declaring “**Simulated Engine Failure**”. While accomplishing the required emergency procedures, the candidate will be expected to use good decision-making and demonstrate the competence to perform a safe gliding approach to a suitable landing area so that a safe landing could be made if the approach were continued to the ground. Unless the intent is to execute an actual landing on a suitable surface, an overshoot will be carried out when requested by the examiner at an operationally safe altitude.

The candidate is expected to clear the engine at appropriate intervals during the descent. In very cold conditions, it is acceptable for the candidate to configure the aeroplane by lowering some flap and using some residual power to achieve a normal power-off gliding descent angle and airspeed.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) control the aeroplane and initially establish the recommended best glide speed (+10/-5 knots);
- (b) specify a suitable landing area and a touchdown zone in the first 1/3 of the landing area, considering wind conditions, terrain, obstacles and other factors;
- (c) fly an organized approach while adjusting the flight profile to arrive at key points at the desired height and position;
- (d) complete the basic vital actions and passenger emergency safety review from memory and simulate an appropriate radio call, if time permits;
- (e) fly an organized approach towards the selected touchdown zone with a level of precision that would avoid touching down more than 1,000 feet (300 meters) beyond the end of the selected touchdown zone;

Note 1: An approach that would have resulted in touching down more than 1,000 feet beyond the end of the selected touchdown zone will be considered a major error and assessed with a mark of “2” or less.

Note 2: After initially establishing the recommended glide speed, the candidate may vary the airspeed and flight profile, as required to achieve a successful and safe approach, without exceeding any aircraft limitations.

Note 3: A change of field is acceptable from an altitude or point in the approach where a landing could still have been made on the originally chosen landing site.

Ex. 23 Pilot Navigation

Aim

To use an aeronautical chart to effectively navigate from one place to another.

Description

When requested by the examiner, the candidate will demonstrate the proficiency to navigate from a known position to a position assigned by the examiner. This is an assessment of proficiency to navigate using pilotage (map reading of paper charts) and geographic features such as roads, railways, and rivers, if they are available. Rulers, notched pencils, protractors, devices such as ForeFlight and computers will not be used for this item.

The exercise will be continued at least to the stage where the aeroplane is established on the proposed track or is following a suitable geographic feature in a manner that will ensure arrival at the destination is predictable.

Performance Criteria

Assessment will be based on the candidate's proficiency to:

- (a) identify landmarks by relating chart symbols to surface features
- (b) establish the aeroplane on a track or follow a geographic feature that will lead to the assigned destination;
- (c) provide an estimated time of arrival that is sufficiently accurate to predict that the exercise can be conducted as planned; and
- (d) maintain the selected altitude (± 200 feet).

Ex. 29 Emergency Procedures/Malfunctions

Aim

To react promptly and correctly to actual or simulated emergencies and system or equipment malfunctions by carrying out vital action checks by memory and following up with the appropriate checklist. Some checks may be actioned by reference to the appropriate checklist..

Description

The examiner will assess the candidate's knowledge of emergency procedures or abnormal conditions. Assessment may be carried out during any portion of the flight test. The candidate is expected to complete any applicable vital actions by memory and follow up by consulting the appropriate emergency checklist.

Performance Criteria

Assessment will be based on the candidate's proficiency to analyze the situation, take appropriate action and follow the appropriate memory items, emergency checklists or procedures, for any two (2) of the following simulated emergencies/malfunctions, as specified by the examiner:

- (a) partial power loss;
- (b) rough engine operation or overheat;
- (c) loss of oil pressure;
- (d) fuel starvation;
- (e) electrical fire;
- (f) vacuum system failure;
- (g) pitot or static blockage;
- (h) cabin fire;
- (i) carburetor icing;
- (j) electrical malfunctions;
- (k) flap failure;
- (l) brake failure or seizure;
- (m) door opening in flight;
- (n) spin recovery
- (o) emergency descent;
- (p) any other emergency unique to the aeroplane.

It is the sole responsibility of the examiner to determine if aeroplane performance, weather conditions and other factors permit the safe conduct of an emergency procedure in flight or on the ground with the engine running. Some of the items may be tested on the ground with the engine shut down.

Tips on How to Pass the Flight Test

Instructors prepare their students for the flight test with every training trip. They do this by helping the student master all the flight exercises, but they also let the student take more and more responsibility for decision-making with each lesson, so the student will be fully ready to make **all** the decisions during the flight test.

Here are some tips on how to pass the flight test:

- (a) Review the flight test guide with your instructor before the flight test.
- (b) An instructor will do a pre-test evaluation, a simulated flight test, before recommending you for the real test.
- (c) Be rested.
- (d) Arrive early.
- (e) The test measures your skill, item by item. If you think you did poorly on one item, try very hard to focus on the immediate task and don't let yourself be pre-occupied with an item you already completed. Besides, you may have done better than you thought.
- (f) Avoid misunderstandings and ask for clarification if unsure about anything. Don't be afraid to ask the examiner if you are unsure what is expected of you. The examiner will either tell you what you need to know or tell you that you have to work with the information you have.
- (g) Tell the examiner what you are planning to do before you do it.
- (h) The flight test is not a race. Don't put additional pressure on yourself by rushing.
- (i) "Visualize" the flight test in advance by thinking through all the manoeuvres you will perform and developing mental pictures of what you are going to be doing.
- (j) Difficult as this may be, try to think of the examiner as your very first passenger with your new licence. Keep the examiner informed, as you would keep a passenger informed.

RECOMMENDATION FOR FLIGHT TEST RECREATIONAL PILOT PERMIT – AEROPLANE

Name of Candidate (Print)	Licence/Permit Number
Flight Experience: Dual Solo	Flight Training Unit ID Number

I, the undersigned instructor certify that:

- (a) the above named candidate meets the minimum experience requirements of section 421.14 of the *Personnel Licensing and Training Standards*.
- (b) training for all of the exercises in the *Flight Training Manual* and the *Flight Instructor Guide* from Ex. 1 thru to Ex. 23 and Ex. 29, including Ex. 13 has been completed;
- (c) a pre-test evaluation of all required flight test items has been completed with the candidate;
- (d) the candidate is consider to have reached a sufficient level of competency to complete the flight test required for the issuance of the Recreational Pilot Permit – Aeroplane;
- (e) I hereby recommend the candidate for the flight test; and further that;
- (f) I am qualified through the privileges of my pilot licence to make this recommendation.

Name of Instructor Recommending Test (Print)	Class	Licence Number
Signature	Date	Flight Training Unit
Name of Supervising Instructor (if recommending instructor is Class 4) (Print)	Licence Number	
Signature	Date	

RECOMMENDATION FOR PARTIAL FLIGHT TEST RECREATIONAL PILOT PERMIT – AEROPLANE

Name of Candidate (Print)	Licence/Permit Number
Flight Experience: Dual Solo	Flight Training Unit ID Number

I have conducted a review of the flight test item(s) _____ and have completed additional training with this candidate.

I consider the candidate to have reached a sufficient level of proficiency to successfully complete the flight test for the issuance of the Recreational Pilot Permit - Aeroplane and hereby recommend the candidate for the partial flight test.

I further certify that I am qualified through the privileges of my pilot licence to make this recommendation.

Name of Instructor Recommending Test (Print)	Class	Licence Number
Signature	Date	Flight Training Unit
Name of Supervising Instructor (if recommending instructor is Class 4) (Print)	Licence Number	
Signature	Date	