CIVIL AVIATION AUTHORITY
OF NEW ZEALAND

FLIGHT TEST STANDARDS GUIDE

COMMERCIAL PILOT LICENCE ISSUE

and

BIENNIAL FLIGHT REVIEW (BFR)

BALLOON

Assessment criteria for the guidance of flight examiners

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Foreword

Flight Test Standards Guides have been compiled for use by both flight examiners and flight instructors and are the acceptable means of compliance for use in conjunction with specific flight test syllabuses prescribed in the appropriate Advisory Circulars.

This Flight Test Standards Guide was developed by John Parker, the CAA General Aviation Examiner. Subsequent consultation with industry flight examiners has resulted in further refinement.

All initial issue flight tests are to be conducted in accordance with the parameters laid down in this guide. This applies to:

- Part 141 flight testing organisations
- Delegated flight testing organisations
- All flight examiners

Any feedback regarding this publication should be directed to info@caa.govt.nz.

Change Notice

Revision 1 (in accordance with the Coroners suggestions) places more emphasis on obstacle avoidance through situational awareness and depth of knowledge of pre and post collision actions (pages 64/65).

Holders of Revision 0 should print pages 64 and 65 and insert them into the FTSG until the printed version of Revision 1 is available.

Introduction

This guide contains standards for the Commercial Pilot Licence (Balloon) issue flight test and BFR and is to be used by flight examiners who hold the examiner privilege of Commercial Pilot Licence issue flight test (Balloon).

Flight instructors may also use this booklet when preparing candidate's for flight tests. However, flight instructors are reminded of their obligation to teach to a syllabus rather than the specific flight test requirements.

This flight test guide is based upon the following references;

- CAR Part 61 Pilot Licences and Ratings.
- CAR Part 91 General Operating Flight Rules.
- Advisory Circular to Part 61, Pilot Licences and Ratings.
- NZAIP.
- Manufacturer's Pilot Operating Handbooks.
- Aircraft Flight Manuals.
- Gronlund, N.E., & Linn, R.L. (1990). Measurement and evaluation in teaching. (6th ed.) New York: Macmillan.
- FAA Practical Test Standards.

Publications recommended for further reference include;

- FAA Balloon Flying Handbook (FAA-H-8083-11A)
- UK CAA Air Operators Certificates: Operations of Balloons
- CAANZ Policy on Threat and Error Management

Flight test standard concept

Civil Aviation Rule (CAR) Part 61 and the associated Advisory Circulars (AC) specify the areas in which knowledge and skill must be demonstrated by the candidate before a pilot licence or rating is issued.

Flight test standards guides provide the flexibility to permit the CAA to publish flight test standards containing specific TASKS (procedures and manoeuvres) in which pilot competency must be demonstrated.

Adherence to the provisions of the appropriate flight test standard is mandatory for the evaluation of pilot candidates.

Where reference is made to recommended procedures, these are based on the FAA Balloon Flying Handbook (FAA-H-8083-11A).

Flight test guide description

Flight test guides are available to flight examiners and appropriately qualified flight instructors on the CAA web site www.caa.govt.nz and amendments are notified to those who register for the free notification service.

This flight test guide has been designed to minimise the degree of subjectivity in the test although the examiner will still have to exercise judgement where weather factors such as wind shear affect the aircraft's performance.

The assessment criteria, defines performances that are 'ideal' and 'not yet competent', more importantly a 'competent' performance is also defined.

Generally the terms sufficient and adequate are used to describe a minimum pass while the terms thorough, sound, accurate, correct, fully, and exactly are used to describe the desired 'ideal' performances at the top end of the scale.

The rating scale 0 – 100 with competence achieved at 70% and an above average performance achieved at 85% may also be used if preferred.

Flight test standard description

TASKS are procedures and manoeuvres appropriate to the demonstration required for Commercial Pilot Licence (Balloon) issue and Biennial Flight Review.

The OBJECTIVE that appears below the task relates that task to the regulatory requirement and lists the important elements that must be satisfactorily performed to demonstrate competency in that task.

The minimum acceptable standard of performance for a task is described in the column stating COMPETENT performance.

The ideal level of competence for a task is described in the right column. In many cases the perfect performance is not achievable but is simply stated as an ideal against which performance can be measured.

Unacceptable performance of a task is described in the NOT YET COMPETENT column.

The ACTION assists the flight examiner/instructor in ensuring that the task objective is met, and in some instances, alerts the flight examiner/instructor to areas upon which emphasis should be placed.

The conditions under which the task is to be performed are expanded on under the ‘satisfactory/unsatisfactory performance’ headings, which follow.

Use of the flight test guide

The CAA requires that each flight test be conducted in compliance with the appropriate flight test standard. When using the flight test guide the flight examiner/instructor must evaluate the candidate's knowledge and skill in sufficient depth to determine that the standards of performance listed for the tasks are met.

When the flight examiner/instructor determines, during the performance of one task, that the knowledge and skill of another task is met, it may not be necessary to require performance of the other task.

The flight examiner/instructor is not required to follow the exact order in which the tasks appear. The flight examiner/instructor may change the sequence or combine tasks with similar objectives to save time. Flight examiners/instructors will develop a plan of action that includes the order and combination of tasks to be demonstrated by the candidate in a manner that will result in an efficient and valid test.

Flight examiners and instructors will place special emphasis on areas of operation that are most critical to flight safety. Among these are correct control within the manufacturer's limitations, sound judgement in decision making, emergency procedures, situational awareness, collision avoidance and the use of checklists where appropriate. Although these areas may not be shown under each task, they are essential to flight safety and will receive careful evaluation throughout the flight. If these areas are shown in the objective, additional emphasis will be placed on them.

Evaluation methods

Evaluation methods, as used by flight instructors, must not be confused with the evaluation used by flight examiners. Flight instructors use three forms of evaluation. These are; placement, formative and diagnostic.

Placement evaluation

"Placement evaluation is concerned with the pupil's entry performance and typically focuses on....does the pupil possess the knowledge and skills needed to begin the planned instruction?" (Gronlund & Linn, 1990, p.12). This type of evaluation is, for example, commonly carried out by the C.F.I on a student, new to the organisation who already has some flying experience, before briefing and assigning an instructor to continue the student's training.

Formative evaluation

"Formative evaluation is used to monitor learning progress during instruction. Its purpose is to provide continuous feedback to both pupil and teacher concerning learning successes and failures" (Ibid., p.12). This type of evaluation is an ongoing process. It is used throughout the student's training, during every instructional period. "Since formative evaluation is directed toward improving learning and instruction, the results are typically *not* used for assigning course grades" (Ibid., p.13).

Diagnostic evaluation

"The main aim of diagnostic evaluation is to determine the cause of persistent learning problems and to formulate a plan for remedial action" (Ibid., p.13). This type of evaluation is used by flight instructors to determine why a student is having problems executing a TASK, for example; maintaining level flight.

Whereas flight examiners use only summative evaluation.

Summative evaluation

Summative evaluation "is used primarily ...for certifying pupil mastery of the intended learning outcomes." (Ibid., p.13). It is used by flight examiners to assess the candidate's performance against stated minimum standards. *Wherever possible* summative evaluation should be carried out by an independent examiner (not directly involved in the candidate's training).

Formative evaluation and flight instruction have no place in summative evaluation.

Flight instructors who hold flight examiner privileges must totally separate the types of evaluation they use as flight instructors, from the requirements of summative evaluation when as flight examiners, they conduct a flight test on behalf of the Civil Aviation Authority.

Because the flight examiner is **only** assessing the candidate's performance against stated minimum standards, the examiner is not designated as the pilot-in-command (except in those cases where it is required by CAR), nor is the examiner giving instruction. However, flight examiners are credited with the flight time during a flight test and may log the flight time as pilot-in-command, but not as instruction.

Flight instructors who conduct BFRs may need to use all forms of evaluation to achieve the required demonstration of competence and therefore act as pilot in command and shall log the time as instruction.

Flight test prerequisites

A candidate for CPL (B) issue flight test is required by Civil Aviation Rule to;

(a) hold appropriate current written examination credit(s), and

(b) present all relevant knowledge deficiency reports; and

(c) have a certified logbook record of the requisite flight training and experience, and

(d) have proof of their identity, and

(e) hold a type rating for the balloon to be used.

Flight examiner responsibility

The Flight Examiner who conducts the issue flight test or the instructor who conducts the BFR is responsible for determining that the candidate meets the standards outlined in the objective of each TASK.

The examiner/instructor shall meet this responsibility by taking an ACTION that is appropriate for each task.

For each task that involves "knowledge only" elements, the flight examiner or instructor will orally question the candidate on those elements.

For each task that involves both "knowledge and skill" elements, the flight examiner/instructor will orally question the candidate on the knowledge elements and ask the candidate to perform the skill elements. Oral questioning may be used at any time during the flight test.

To minimise the risk of misunderstandings, the examiner will:

(a) Ask the candidate to verbalise checklists and all vertical speed limits.

(b) Brief the candidate on the flight format.

(c) Brief the candidate as to who is pilot-in-command.

(d) Brief the candidate as to who will initiate the missed approach (if required) during high wind landings.

Aircraft and equipment requirements for flight test

The candidate is required to provide an aircraft for the flight test. The aircraft must be equipped for, and its operating limitations must not prohibit, the pilot operations required during the test.

The candidate is required to provide adequate and private facilities for briefing prior to and after the flight test.

Satisfactory performance

The ability of a candidate to perform the required TASK is based on;

(a) executing tasks within the aircraft's performance capabilities and limitations as laid down in the aircraft's flight manual, including use of the aircraft's systems,

(b) executing emergency procedures and manoeuvres, appropriate to the aircraft and in accordance with recommended procedures,

(c) piloting the aircraft with accuracy, in accordance with the limitations detailed in this guide,

(d) exercising above average judgement/decision making and maintaining situational awareness,

(e) applying aeronautical knowledge (principles of flight) to in-flight situations,

(f) completing all items in accordance with the tolerances prescribed in this guide,

(g) showing complete control of the aircraft, with the successful outcome of a task never seriously in doubt, and

(h) for the purpose of initial licence issue, executing elements of a task described as "**critical**" to at least the minimum acceptable performance level on the first attempt.

Unsatisfactory performance

If, in the judgement of the flight examiner, the candidate does not meet the minimum standard of any task performed, the task demonstration is failed and therefore the flight test is failed. In the case of a BFR the instructor shall detail the further training required.

The examiner may permit a second attempt at any (maximum 3) task(s) or element(s) [other than **critical tasks or elements**], provided that, in the opinion of the examiner, the safety of the aircraft was not compromised, the professional standing of the licence would not be diminished or a clear misunderstanding of the examiner's requirements occurred.

The flight examiner or candidate may discontinue the issue test at any time after the failure of a task makes the candidate ineligible to pass the flight test. The test will ONLY be continued with the consent of the candidate.

An excessive allowance for poor candidate performance due to weather conditions should not be made. Rather, the candidate's decision making process, in electing to commence or continue, should be questioned.

Failure to take corrective action when tolerances are exceeded is unsatisfactory performance.

Flight that is maintained within the stated tolerances but deviates from the maximum positive limit to the maximum negative limit is unsatisfactory performance.

Any action or lack of action by the candidate, which requires corrective intervention by the flight examiner to maintain safe flight, will be disqualifying.

It is vitally important that the candidate uses proper scanning techniques to clear the area before performing manoeuvres. Ineffective performance will be disqualifying.

Unsatisfactory performance in any item will result in the candidate and the instructor being advised of the failure aspects and the additional training believed necessary before a further flight test may be undertaken.

Recording unsatisfactory performance

The term TASK is used to denote areas in which competency must be demonstrated. When performance is unsatisfactory the flight examiner must record it on the flight test report against the specific task.

Distractions in flight

Numerous studies indicate that accidents have occurred when a pilot's attention has been distracted. It is important, therefore, that the principles of *Threat and Error Management* are understood and mitigation strategies such as good control techniques, the ability to establish priorities and sound *airborne decision-making* are instilled in training.

Flight Examiners, Instructors and Trainees should be aware at all times that distractions are an inherent part of flight and an ever-present threat to safety.

Some examples that occur in training and testing are:

(a) Identifying a field suitable for emergency landings,
(b) Identifying features or objects on the ground,
(c) Questioning by the flight examiner or instructor,
(d) General conversation,
(e) Simulating adverse weather conditions,
(f) Experiencing visual illusions.

Use of checklists

Throughout the flight the candidate is evaluated on the use of checklists. The candidate should complete an appropriate set of checks for the task in hand.

The situation may be such that the use of a written checklist while accomplishing the task would be either unsafe or impractical. In such situations the checklists should be memorised.

ASSESSMENT CRITERIA

Task: Personal preparation

Objective:

To determine that the candidate demonstrates a professional attitude by;

(a) Arriving for the test or review;

1. Punctually
2. Suitably attired (in keeping with safety considerations)
3. Fit for flying.

(b) Presenting;

1. An up to date, summarised and certified pilot's logbook
2. Evidence of type rating (if applicable)
3. The appropriate written (current) examination credit(s)
4. A current AIP Volume 4, VNC and appropriate topographical and road maps.

(c) Demonstrating knowledge of the licensing and currency requirements for a commercial pilot.

Action:

The examiner/instructor will;

(a) Observe the candidate's punctuality, attire, and as far as practicable, determine that the candidate is fit to fly.

(b) By examination of the candidate's logbook, determine that all statutory flight time requirements have been met and that the flight training syllabus has been completed.

(c) Ensure that the candidate holds the appropriate (current) exam credit(s) and balloon type rating (if applicable).

(d) Determine that the candidate's AIP Volume 4, VNC and appropriate topographical and road maps are current.

(e) Determine that the candidate has adequate knowledge of the privileges and currency requirements of a Commercial Pilot.

Personal Preparation

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Unacceptably late	(1) Late with acceptable excuse	(1) Arrives punctually
(2) Dressed inappropriately for flying (wears Jandals/high heels)	(2) Dressed in keeping with a professional qualification	
(3) Is physically or mentally unfit for test and/or does not comply with any medical restriction endorsed on their medical certificate	(3) Fit but clearly nervous	(3) Fit and enthusiastic
(4) Logbook records incomplete, minimum flight times not met	(4) Logbook records complete	(4) Logbook records are neat and complete in all respects
(5) Training syllabus not completed	(5) Minimum training syllabus completed	
(6) Inappropriate or expired written exam credit(s)	(6) Appropriate and current written exam credit(s)	(6) Appropriate and current written exam credit(s) with KDR's signed off and evidence of knowledge improvement
(7) NZAIP Volume 4 and/or VNC are not available or not current	(7) NZAIP Volume 4, a VNC and road maps (as applicable) are available and current	(7) NZAIP Volume 4, a VNC and applicable road maps are current and readily available throughout the flight
(8) Unaware of licence privileges and/or currency requirements	(8) Demonstrates a basic knowledge of privileges and currency requirements	(8) Demonstrates a sound knowledge of privileges and currency requirements

ASSESSMENT CRITERIA

Task: Aircraft documents

Objective:

To determine that the candidate exhibits adequate knowledge of the;

(a) Certificate of Airworthiness.

(b) Aircraft technical log.

(c) Aircraft flight manual (including CAA forms 2173 and 2129) and associated pilot's operating handbook.

(d) Limitations applicable to the balloon type (**critical element**).

Action:

The examiner/instructor will;

(a) Question the candidate about the aircraft's documents, and determine that the candidate's performance meets the objective.

(b) Place emphasis on the candidate's awareness of documents and aircraft limitations.

Aircraft Documents

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Has insufficient knowledge of the aircraft's documents	(1) Demonstrates adequate knowledge of the aircraft's documents	(1) Demonstrates a thorough knowledge of the aircraft's documents
(2) Has insufficient knowledge of the aircraft's limitations	(2) Demonstrates a good general knowledge of the aircraft's limitations (**critical element**)	(2) Demonstrates a sound knowledge of the aircraft's limitations

ASSESSMENT CRITERIA

Task: Weather and NZAIP supplements

Objective:

To determine that the candidate;

(a) Exhibits adequate knowledge of aviation weather and flight planning data by obtaining, reading and analysing;

1. Aviation weather including ARFOR's, TAFs and METARs with associated SPECIs and SIGMETs
2. NOTAM's
3. Pilot balloon (pibal)

(b) Exhibits adequate knowledge of the NZAIP Volume 4 and VNC contents and use.

(c) Makes a sound go/no-go decision based on the available weather and flight planning data (**critical element**).

Action:

The examiner/instructor will;

(a) Determine that the candidate has obtained all relevant weather and flight planning data relating to the flight test or hypothetical cross-country flight.

(b) Require the candidate to analyse and explain the weather and relevant flight planning data, and determine that the candidate's performance meets the objective.

(c) Place emphasis on the candidate's ability to use and interpret the NZAIP Volume 4 and VNC.

(d) Place emphasis on the candidate's ability to interpret the weather and NOTAM's and to make a sound go/no go decision.

Weather and NZAIP

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Cannot obtain Met data and/or fails to use a pibal	(1) Obtains sufficient Met data (including pibal) to meet the requirements of the proposed or hypothetical flight	(1) Obtains all Met data appropriate to the proposed or hypothetical flight including accurate pibal interpretation
(2) Cannot obtain NOTAM's	(2) Obtains and reviews NOTAM's relevant to the proposed or hypothetical flight	(2) Obtains, reviews and demonstrates a thorough understanding of the relevance of NOTAM's to the proposed or hypothetical flight
(3) Cannot read TAF or METAR	(3) Demonstrates ability to interpret TAF, METAR and ARFOR's	(3) Demonstrates ability to analyse ARFOR's, TAF, METAR and SPECI, SIGMET if applicable
(4) Knowledge of the NZAIP Volume 4 and/or VNC contents seriously flawed	(4) Demonstrates an appropriate level of knowledge on the contents and use of the NZAIP Volume 4 and VNC	(4) Demonstrates a thorough understanding of the contents and use of the NZAIP Volume 4 and VNC
(5) Does not demonstrate an appreciation of the relevance of flight planning data to the proposed or hypothetical flight	(5) Demonstrates sufficient understanding of flight planning data to make a go/no go decision (**critical element**)	(5) Demonstrates a thorough understanding of flight planning data and is able to make a sound go/no-go decision

ASSESSMENT CRITERIA

Task: Systems operation

Objective:

To determine that the candidate;

(a) Demonstrates a professional understanding of the fuel system, burners, pilot lights and associated gauges.

(b) Establishes the fuel quantity on board the aircraft prior to the flight and calculates endurance (**critical element**).

(c) Understands flight instruments and gauges.

(d) Correctly operates venting systems.

(e) Has in depth knowledge of the use of deflation systems (**critical element**).

Action:

The examiner/instructor will;

(a) Require the candidate to demonstrate the use of the fuel system, burners, pilot lights and associated gauges under normal and abnormal conditions.

(b) Determine that the candidate can establish the quantity of fuel on board the aircraft and monitor fuel consumption during flight.

(c) Monitor the candidate's reference to flight instruments and gauges.

(d) Observe the candidate's operation of the venting system to determine that the candidate's actions are in accordance with the aircraft's flight manual or checklist.

(e) Question the candidate on the use of deflation systems.

Systems Operation

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Cannot explain the use of the fuel system, burner, pilot light and/or associated gauges	(1) Adequately explains the use of the fuel system, burners, pilot lights and associated gauges	(1) Has a thorough understanding of the use and interrelationship between the fuel system, burners, pilot lights and associated gauges
(2) Does not establish the quantity of fuel on board	(2) Establishes the quantity of fuel on board and calculates endurance (**critical element**)	(2) Accurately establishes the quantity of fuel on board and converts this to flight time, including reserve
(3) Does not monitor flight instruments and/or does not confirm the minimum fuel system pressure as required by the POH is achieved	(3) Adequately monitors flight instruments and fuel system pressure as required by the POH	
(4) Cannot operate the venting system	(4) Correctly operates the venting system	(4) Operates the venting system in strict accordance with the aircraft's flight manual
(5) Cannot describe the correct operation of the deflation system	(5) Describes, in depth, the operation of the deflation system (**critical element**)	(5) Describes the operation of the deflation system in strict accordance with the aircraft's flight manual

ASSESSMENT CRITERIA

Task: Launch site selection

Objective:

To determine that the candidate;

(a) Exhibits knowledge of launch site selection considerations.

(b) Arranges to launch at a suitable time considering atmospheric conditions.

(c) Makes a sound go/no-go decision based on all launch site considerations (**critical element**).

Action:

The examiner/instructor will;

(a) Require the candidate to explain the considerations of launch site selection with emphasis on the size and surface condition of the site, accessibility and surrounding obstructions, surface wind, winds aloft and the suitability of landing areas.

(b) Observe the candidate's selection of a suitable launch time with consideration of atmospheric conditions.

(c) Determine that the candidate's go/no-go decision is appropriate based on all launch site considerations.

Launch Site Selection

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Cannot explain how the considerations of launch site selection affect the proposed operation	(1) Explains the considerations of launch site selection with emphasis on the size and surface condition of the site, accessibility and surrounding obstructions, surface wind, winds aloft and the suitability of landing areas	(1) Explains the considerations of all launch site selection criteria and their interrelationships with emphasis on the proposed operation
(2) Nominates an inappropriate launch time for the actual or expected atmospheric considerations	(2) Nominates an appropriate launch time in relation to CET/MCT and the atmospheric considerations	(2) Nominates the ideal launch time in relation to CET/MCT and the actual or expected atmospheric considerations
(3) Makes an inappropriate "go" decision	(3) Makes an appropriate go/no-go decision based on all launch site considerations (**critical element**)	(3) Makes a sound go/no-go decision based on all launch considerations

ASSESSMENT CRITERIA

Task: Crew briefing and preparation

Objective:

To determine that the candidate;

(a) Exhibits adequate knowledge of crew briefing and preparation.

(b) Designates a crew chief and briefs crew members in safety procedures, awareness and the responsibilities of each crew member.

(c) Establishes a common means of communication.

(d) Describes the proposed direction of flight and estimated time aloft.

(e) Ensures that all necessary equipment is on board.

(f) Supervises and coordinates all activities.

Action:

The examiner will act in the role of an inexperienced crew member or passenger (at examiner discretion) and;

(a) Observe the candidate's performance to determine that it meets the objectives.

Crew Briefing and Preparation

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Does not brief the crew or overlooks important aspects	(1) Carries out an effective crew briefing	(1) Carries out a comprehensive and concise crew briefing
(2) Does not designate a crew chief and/or fails to make clear the duties and responsibilities of each crew member	(2) Designates a crew chief and makes clear the duties and responsibilities of each crew member	(2) Explains the duties and responsibilities of each crew member in all areas of safety procedures and awareness including; layout and assembly, tie-off, inflation, landing, recovery and emergency procedures
(3) Does not establish a common means of communication	(3) Establishes a common means of communication through hands signals and/or two-way radio	
(4) Does not indicate the direction of flight and/or the time aloft	(4) Describes the proposed direction of flight and estimates the time aloft	(4) Accurately describes the direction of flight and the time aloft
(5) Leaves a necessary piece of equipment behind	(5) Ensures all necessary equipment is on board	(5) Ensures all necessary and desirable equipment is on board and correctly stowed
(6) Fails to supervise and/or coordinate activities of the crew	(6) Supervises and coordinates crew activities	(6) Closely supervises and fully coordinates crew activities

ASSESSMENT CRITERIA

Task: Layout and assembly

Objective:

To determine that the candidate exhibits a sound knowledge of balloon assembly by demonstrating the appropriate;

(a) Positioning of the envelope and basket considering wind, surface conditions and obstacles.

(b) Assembly of the fuel system and checks for security, leaks and correct fuel pressure (**critical element**).

(c) Attachment of the basket to the envelope and all cables and lines in accordance with the pilot operating handbook, tying off the basket before cold air is introduced to the envelope.

(d) Use of a checklist.

Action:

The examiner/instructor will;

(a) Observe the candidate's layout and assembly of the balloon and determine that the candidate's performance meets the objectives.

Layout and Assembly

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Positions the envelope and basket without due regard to wind, surface condition and/or obstacles	(1) Positions the envelope and basket appropriately	
(2) Assembles the fuel system (if appropriate) but neglects to check for leaks and/or correct fuel pressure	(2) Assembles fuel system appropriately (**critical element**)	(2) Assembles the fuel system and checks for security, leaks and the correct fuel pressure in accordance with the POH
(3) Disregards security of baggage and loose articles and/or does not tie off the basket	(3) Ties off and assembles the basket to envelope and all cables and lines appropriately	(3) Securely ties off the basket and correctly connects all cables and lines in accordance with the flight manual
(4) Does not cross check assembly by use of a checklist	(4) Uses and completes an appropriate checklist	(4) Uses and completes the manufacturers checklist

ASSESSMENT CRITERIA

Task: Pre-flight inspection

Objective:

To determine that the candidate exhibits a sound knowledge of the balloon type by explaining or demonstrating the appropriate;

(a) Pre-flight inspection including checking of fuel and burner system, venting/deflation system, basket/envelope suspension and handling lines, instruments and gauges in accordance with the checklist.

Action:

The examiner/instructor will;

(a) Observe the candidate carrying out a pre-flight inspection and determine that the candidate's performance meets the objectives.

(b) Question the candidate on any/all significant balloon features and the candidate's verification of the balloons condition for safe flight.

(c) Question the candidate on how to detect possible defects.

Pre-flight Inspection

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Conducts the pre-flight inspection in a non-methodical way or neglects significant items	(1) Conducts the pre-flight inspection in an orderly and systematic way and verifies the balloon is in a condition for safe flight	(1) Conducts the pre-flight inspection thoroughly and in accordance with the Pilot's Operating Handbook
(2) Is ignorant of the purpose of, or cannot identify, significant features	(2) Identifies all significant features	(2) Identifies and explains the purpose of any and all features when asked
(3) Is unsure of how to detect possible defects	(3) Demonstrates adequate knowledge of how to detect possible defects	(3) Demonstrates a thorough understanding of how to detect possible defects

ASSESSMENT CRITERIA

Task: Inflation

Objective:

To determine that the candidate;

(a) Accomplishes the tie-off procedure.

(b) Positions inflator fan for initial cold inflation.

(c) Controls and supervises the passenger(s) throughout the inflation process.

(d) Inflates balloon to a vertical position and maintains control.

(e) Positions and secures the vent/deflation lines.

Action:

The examiner will;

(a) Observe the candidate's performance to determine that it meets the objectives.

(b) Determine the candidate's knowledge of inflation procedures by further questioning, as necessary.

Inflation

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Cannot or does not complete the tie-off procedure	(1) Completes the appropriate tie-off procedure	(1) Completes the appropriate tie-off procedure in accordance with recommended procedures
(2) Incorrectly positions the inflator for initial cold inflation	(2) Correctly positions the inflator fan for initial cold inflation	
(3) Fails to supervise the passenger(s)	(3) Supervises the passenger(s) during the inflation process	(3) Controls and closely supervises the passenger(s) throughout the inflation process
(4) Over inflates the balloon and/or fails to achieve the vertical	(4) Inflates the balloon to a vertical position	(4) Accurately inflates the balloon to a precisely stable vertical position
(5) Does not correctly position and/or secure the vent/deflation lines	(5) Correctly positions and secures the vent/deflation lines	

ASSESSMENT CRITERIA

Task: Passenger briefing

Objective:

To determine that the candidate;

(a) Supervises the passenger(s)

(b) Briefs the passenger(s) about;

1. Boarding, in-flight and landing procedures and behaviour.
2. The action in the event of an emergency landing and where appropriate in the event of a water landing.
3. The rules regarding smoking.

Action:

The examiner will act in the role of an inexperienced passenger and;

(a) Observe the candidate's performance to determine that it meets the objectives.

(b) Determine the candidate's knowledge of the use of the aircraft emergency equipment by further questioning, as necessary.

Passenger Briefing

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Does not supervise passengers	(1) Ensures passengers are supervised	(1) Ensures passengers are closely supervised
(2) Does not brief passengers on the boarding, in-flight and/or landing procedures and behaviour	(2) Gives passengers a briefing on the boarding, in-flight and landing procedures and behaviour	(2) Gives passengers a briefing on the boarding, in-flight and landing procedures and behaviour
(3) Does not brief passengers on emergency landing and ditching procedures (if applicable)	(3) Briefs passengers on emergency landing and ditching procedures (if applicable)	(3) Briefs passengers thoroughly on actions in the event of an emergency and ditching procedures
(4) Does not instruct the passengers on the location of emergency equipment	(4) Gives passengers a briefing on emergency equipment	(4) Briefs passengers fully on the location and use of emergency equipment
(5) Permits smoking in contradiction of flight manual limitations	(5) Fails to brief passengers on smoking, but does not permit it	(5) Briefs passengers on smoking rules, and does not permit it

ASSESSMENT CRITERIA

Task: Basket/Gondola management

Objective:

To determine that the candidate;

(a) Secures all loose items.

(b) Organises material and equipment in a logical, efficient manner.

Action:

The examiner will;

(a) Observe the candidate's performance to determine that it meets the objectives.

Basket/Gondola Management

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Does not secure loose items that present a threat	(1) Secures all loose items	
(2) Does not instruct the passengers on the location of emergency equipment	(2) Organises equipment in a logical manner	(2) Organises equipment and material in a logical and optimally efficient manner

ASSESSMENT CRITERIA

Task: Pre-launch check

Objective:

To determine that the candidate;

(a) Reviews wind conditions, temperature and obstructions.

(b) Completes final instrument serviceability checks.

(c) Ensures that vent/deflation lines are positioned and secured properly.

(d) Accomplishes final coordination with ground crew, including signals and emergency procedures.

(e) Completes the pre-launch checklist and confirms that the balloon is in a safe operating condition.

(f) Brings the balloon to equilibrium.

(g) Divides attention in and around the basket/gondola, ensuring there is no conflict with traffic prior to launch.

Action:

The examiner/instructor will;

(a) Observe the candidate's pre-launch procedures and determine that the performance meets the objectives.

(b) Place emphasis on situational awareness, and avoidance of hazards.

Pre-Launch Check

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Neglects to carry out a review of wind, temperature and/or obstructions prior to launch	(1) Carries out a review of wind, temperature and obstructions prior to launch	(1) Carries out a thorough review of wind, temperature and obstructions prior to launch
(2) Does not complete critical instrument checks	(2) Completes appropriate instrument serviceability checks	(2) Completes all instrument serviceability checks
(3) Does not ensure the vent/deflation lines are secured and/or properly positioned	(3) Ensures the vent/deflation lines are secured, properly positioned and tested	
(4) Ground crew are unclear about the signals to be used and/or emergency procedures	(4) Coordinates signals and emergency procedures with the ground crew	(4) Confirms signals and emergency procedures are clearly understood by ground crew
(5) Fails to complete the pre-launch checklist	(5) Completes the pre-launch checklist to confirm the balloon is in a safe operating condition	(5) Completes the pre-launch checklist and confirms the balloon is in a safe operating condition in all respects
(6) Fails to recognise and maintain equilibrium and/or lifts off prematurely	(6) Brings the balloon to equilibrium	(6) Brings the balloon to equilibrium precisely
(7) Demonstrates poor situational awareness and/or potentially conflicts with other traffic	(7) Divides attention adequately and ensures there is no conflict with traffic above	(7) Demonstrates a high level of situational awareness and ensures there can be no conflict with any other traffic

ASSESSMENT CRITERIA

Task: Radio communications

Objective:

To determine that the candidate;

(a) For licence issue, holds a current valid Flight Radiotelephony examination pass issued by Aviation Services Ltd.

(b) Obtains information from ATIS when appropriate (if available).

(c) Reads back appropriate instructions, information and clearances.

(d) Uses correct aeronautical phraseology at all times with appropriate assertiveness.

(e) Correctly sets QNH (when available) and cross checks the altimeter(s) and has adequate knowledge of appropriate transponder codes.

Action:

The examiner/instructor will;

(a) For licence issue, require the candidate to produce a current and valid pass notification for the subject Flight Radiotelephony.

(b) Observe and monitor the candidate's receipt and copying of ATIS information.

(c) Monitor the candidate's read back of instructions, information and clearances.

(d) Monitor all transmissions made by the candidate for the appropriate level of assertiveness and correctness.

(e) Observe the candidate's altimeter and transponder setting and checking procedure (as applicable) and question on transponder codes.

Radio Communications

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Does not hold a current valid FRTO examination pass (in the case of licence issue)	(1) Holds a current valid FRTO examination pass (in the case of licence issue)	
(2) Does not obtain ATIS when it is appropriate and available	(2) Obtains ATIS (when available) but does not record it	(2) Obtains and records ATIS (when available)
(3) Does not comply with any ATS clearance	(3) Complies with ATS clearances and instructions	(3) Evaluates ATS clearances and instructions, complying or rejecting as appropriate
(4) Fails to read back vital information	(4) Reads back vital instructions, information and clearances	(4) Reads back all appropriate instructions, information and clearances
(5) Unable to communicate using aviation phraseology	(5) Uses correct aviation phraseology most of the time	(5) Uses correct aviation phraseology at all times
(6) Uses slang or adopts an excessively assertive communication style	(6) Communicates in an adequately assertive manner	(6) Communicates in an appropriate, authoritative and assertive manner
(7) Does not set QNH and/or transponder (if applicable)	(7) Sets QNH (when available) or QFE (as appropriate) and cross checks altimeter(s) (if applicable) and sets the correct transponder code (if applicable)	(7) Records and sets QNH (when available) or QFE (as appropriate) and cross checks altimeter(s) for accuracy by an acceptable method (if applicable) sets and understands various transponder codes

ASSESSMENT CRITERIA

Task: Normal launch

Objective:

To determine that the candidate;

(a) Directs the ground crew to clear the area.

(b) Recognises equilibrium.

(c) Uses the tie-off-quick release line correctly.

(d) Recognises wind conditions and the presence of false lift.

(e) Appropriately controls lift-off and the initial ascent.

Action:

The examiner/instructor will;

(a) Observe the candidate's launch procedures and determine that the performance meets the objectives.

(b) Place emphasis on situational awareness, the recognition of false lift, correct balloon control and the avoidance of hazards.

Normal Launch

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Neglects to direct the ground crew clear of the area	(1) Directs the ground crew to clear the area	(1) Ensures the ground crew are clear
(2) Does not recognise equilibrium and/or lifts off prematurely	(2) Recognises equilibrium	(2) Recognises equilibrium precisely
(3) Fails to use or incorrectly uses the tie-off quick release line	(3) Uses the tie-off-quick release line correctly	(3) Uses the tie-off-quick release line in accordance with recommended procedures
(4) Does not recognise the presence of false lift	(4) Recognises the conditions under which false lift may occur	(4) Accurately recognises the conditions under which false lift, may occur and avoids it
(5) Does not maintain control of the aircraft during the lift-off and initial ascent	(5) Maintains control of aircraft during the lift-off and initial ascent	(5) Maintains complete control during lift-off and initial ascent

ASSESSMENT CRITERIA

Task: Launch over obstacle

Objective:

To determine that the candidate;

(a) Determines the height of the obstacle.

(b) Considers distance to the obstacle relative to the wind conditions.

(c) Recognises the presence of false lift.

(d) Acts decisively to clear the obstacle safely.

Action:

The examiner/instructor will;

(a) Observe the candidate's launch procedures and determine that the performance meets the objectives.

(b) Place emphasis on situational awareness, the recognition of false lift (if present) and the candidate's decisiveness.

(c) Question the candidate on the procedures and considerations of a launch over an obstacle if conditions do not permit an additional launch.

Launch Over Obstacle

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Neglects to consider the obstacle	(1) Determines the height of the obstacle	(1) Accurately determines the height of the obstacle
(2) Does not consider the effect of wind conditions on distance to the obstacle	(2) Considers the distance to the obstacle relative to the wind conditions	(2) Evaluates the distance to the obstacle relative to wind conditions and all factors affecting the climb gradient
(3) Does not recognise the presence of false lift	(3) Recognises false lift (if present)	(3) Recognises false lift, avoids it and does not permit it to create a hazard
(4) Does not act decisively to clear the obstacle	(4) Acts decisively to lift off and clear the obstacle	(4) Acts decisively to clear all obstacles under the conditions

ASSESSMENT CRITERIA

Task: Ascents

Objective:

To determine that the candidate is capable of;

(a) Transitioning from level flight to the climb.

(b) Ascending at a specified rate.

(c) Transitioning from the climb to level flight at a specified altitude.

Action:

The examiner/instructor will;

(a) Nominate the rate of climb to be demonstrated and the altitude at which to level off.

(b) Place emphasis on the candidate's demonstration of maintaining the nominated rate of ascent accurately.

(c) Place emphasis on the candidate's demonstration of entering level flight at the nominated altitude.

(d) Observe the candidate's entry to the ascent and levelling off procedures and determine that the candidate's performance meets the objectives.

Ascents

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Maintains in excess of ± 50 feet per minute of the nominated ascent rate	(1) Maintains the nominated ascent rate within ± 50 feet per minute	(1) Maintains the nominated ascent rate accurately
(2) Transitions from the ascent to level flight at more than ± 50 feet and does not correct promptly	(2) Transitions from the ascent to level flight at the nominated altitude ± 50 feet	(2) Transitions from the ascent to level flight at the nominated altitude accurately
(3) Fails to clear the flight path ahead of the aircraft using a recommended procedure, and/or would, if permitted, enter cloud or controlled airspace unintentionally	(3) Clears the airspace around the aircraft regularly in accordance with recommended procedures (**critical element**)	(3) Clears the airspace ahead and above the aircraft, in accordance with the recommended procedure and with an obvious awareness of VMC and controlled airspace restrictions

ASSESSMENT CRITERIA

Task: Level flight

Objective:

To determine that the candidate is capable of;

(a) Maintaining level flight at a nominated altitude ± 50 feet.

(b) Recognising vertical movement and maintaining equilibrium by smooth use of burner controls.

(c) Using instruments to confirm altitude control.

Action:

The examiner/instructor will;

(a) Nominate the altitude at which level flight will be maintained.

(b) Place emphasis on the candidate's demonstration of accurate altitude control.

(c) Observe the candidate's use of burner controls and determine that the candidate's performance meets the objectives.

Level Flight

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Is unable to anticipate the level off	(1) Anticipates the level off	(1) Accurately anticipates the level off
(2) Maintains an altitude in excess of 50 feet of the nominated altitude	(2) Maintains the nominated altitude within 50 feet	(2) Maintains the nominated altitude accurately

ASSESSMENT CRITERIA

Task: Descents

Objective:

To determine that the candidate is capable of;

(a) Transitioning from level flight to the descent.

(b) Descending at a specified rate.

(c) Transitioning from the descent to level flight at a specified altitude.

Action:

The examiner/instructor will;

(a) Nominate the rate of descent to be demonstrated and the altitude at which to level off.

(b) Place emphasis on the candidate's demonstration of maintaining the nominated rate of descent accurately.

(c) Place emphasis on the candidate's demonstration of entering level flight at the nominated altitude.

(d) Observe the candidate's entry to the descent and levelling off procedures and determine that the candidate's performance meets the objectives.

Descents

Rating 70	**85**	**100**
Not yet competent	**COMPETENT**	**Ideal**
(1) Maintains in excess of ± 50 feet per minute of the nominated descent rate	(1) Maintains the nominated descent rate within ± 50 feet per minute	(1) Maintains the nominated descent rate accurately
(2) Transitions from the descent to level flight at more than ± 50 feet and does not correct promptly	(2) Transitions from the descent to level flight at the nominated altitude ± 50 feet	(2) Transitions from the descent to level flight at the nominated altitude accurately
(3) Fails to clear the flight path ahead of and particularly below the aircraft using a recommended procedure, and would, if permitted, enter cloud or controlled airspace unintentionally	(3) Clears the airspace around and particularly below the aircraft regularly in accordance with recommended procedures (**critical element**)	(3) Clears the airspace around and particularly below the aircraft, in accordance with the recommended procedure and with an obvious awareness of VMC, controlled airspace and minimum height restrictions

ASSESSMENT CRITERIA

Task: Approach to landing

Objective:

To determine that the candidate;

(a) Considers the wind conditions, landing area, obstructions and surface and selects the most suitable touchdown point.

(b) Completes the pre-landing checks in accordance with the checklist, stowing loose articles and securing equipment as appropriate.

(c) Briefs the passenger(s).

(d) Establishes the appropriate approach profile and rate(s) of descent.

(e) Makes a timely decision to abort the approach if necessary.

(f) Has sufficient knowledge of the use of drop lines.

Action:

The examiner/instructor will;

(a) Ask the candidate to demonstrate an approach to land and determine that the candidate's performance meets the objective.

(b) Place emphasis on the candidate's selection of landing area and touchdown point.

(c) Determine that the approach profile and rate(s) of descent are appropriate.

(d) Simulate a situation that makes an aborted approach desirable and determine that the candidate's decision to abort is timely.

(e) Question the candidate on the appropriate use of drop lines.

Approach to Landing

Rating 70	85	100
Not yet competent	**COMPETENT**	**Ideal**
(1) Does not select an appropriate touchdown point for the prevailing wind, surface and/or obstructions	(1) Selects the most appropriate touchdown point considering wind, surface and obstructions	(1) Selects an ideal touchdown point considering all relevant factors
(2) Does not complete the pre-landing checks	(2) Completes the pre-landing checks	(2) Completes the pre-landing checks in accordance with the checklist
(3) Does not brief the passenger(s)	(3) Ensures each occupant is briefed	(3) Ensures each occupant is thoroughly briefed and positioned properly in accordance with the conditions for landing
(4) The approach rate of descent is excessive	(4) The approach profile and rate(s) of descent are appropriate	(4) The approach profile and rate(s) of descent are ideal
(5) Does not recognise a situation that makes an aborted landing the most appropriate course of action	(5) Makes a timely decision to abort the approach when confronted with a situation (simulated or actual) that makes an aborted landing the most appropriate course of action	(5) Makes a timely decision to abort the approach and carries out appropriate recovery actions
(6) Cannot demonstrate adequate knowledge of the use of drop lines	(6) Demonstrates adequate knowledge of the use of drop lines	(6) Demonstrates sound knowledge of the use of drop lines

ASSESSMENT CRITERIA

Task: Steep approach to landing

Objective:

To determine that the candidate;

(a) Is capable of making an approach to land over an obstacle.

(b) Completes the pre-landing checks in accordance with the checklist, stowing loose articles and securing equipment as appropriate.

(c) Briefs the passenger(s).

(d) Uses vents and burner controls to appropriately land the balloon and control ground travel.

(e) Demonstrates situational awareness through timing, judgement and control, throughout the approach and landing.

(f) Makes a timely decision to abort the approach if necessary (or if requested at examiner discretion).

Action:

The examiner/instructor will;

(a) Ask the candidate to demonstrate a steep approach to land over an obstacle and determine that the candidate's performance meets the objective.

(b) Place emphasis on the candidate's demonstration of situational awareness through the use of vents and burner controls and determine that the candidate's timing, judgement and control, throughout the approach and landing meet the objectives.

(c) At examiner discretion; simulate a situation that makes an aborted approach desirable and determine that the candidate's decision to abort is timely.

Steep Approach to Landing

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Does not complete the pre-landing checks	(1) Completes the pre-landing checks	(1) Completes the pre-landing checks in accordance with the checklist
(2) Does not brief the passenger(s)	(2) Ensures each occupant is briefed	(2) Ensures each occupant is thoroughly briefed and positioned properly in accordance with the conditions for landing
(3) Approach profile is not appropriate	(3) The candidate demonstrates adequate timing, judgement and control through the use of vents and burner controls, throughout the approach and landing over an obstacle	(3) The candidate demonstrates above average control throughout the approach and landing over an obstacle
(4) Does not recognise a situation that makes an aborted landing the most appropriate course of action	(4) Makes a timely decision to abort the approach when confronted with a situation (simulated or actual) that makes an aborted landing the most appropriate course of action	(4) Makes a timely decision to abort the approach and carries out appropriate recovery actions

ASSESSMENT CRITERIA

Task: Normal landing

Objective:

To determine that the candidate is capable of;

(a) Carrying out a normal landing within the selected area.

(b) Using the vent/deflation system and burner controls appropriately.

(c) Stabilising the balloon prior to occupants exiting.

Action:

The examiner/instructor will;

(a) Observe the candidate's demonstration of a normal landing and determine that the candidate's performance meets the objective.

(b) Place emphasis on the candidate's preparation and use of the vent/deflation system and burner controls to determine that the candidate's performance meets the objectives.

(c) Place emphasis on the candidate's ability to stabilise the balloon prior to the occupants exiting.

Normal Landing

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Lands well outside the nominated area	(1) Completes the landing within the selected area	(1) Accurately completes the landing on the selected aiming point
(2) Does not prepare the vent/deflation system for use	(2) Prepares the vent/deflation system for use	(2) Prepares the vent/deflation system for use in accordance with the checklist
(3) Does not abort the landing when conditions dictate this as the prudent course of action	(3) Aborts the landing when conditions dictate this as the prudent course of action (or as requested by the examiner)	(3) Promptly aborts the landing when prudent or requested by the examiner
(4) Fails to stabilise the balloon on landing	(4) Stabilises the balloon on landing and ensures sufficient negative buoyancy has been achieved	
(5) Does not ensure the balloon is stable prior to allowing occupants to exit	(5) Ensures the balloon is stable prior to allowing occupants to exit	(5) Ensure the balloon is stable and monitors the occupants closely prior to allowing occupants to exit

ASSESSMENT CRITERIA

Task: High wind landing

Objective:

To determine that the candidate is capable of; or if conditions do not permit, has adequate knowledge of;

(a) Carrying out a landing where the surface wind is greater than 10 knots or as specified by the manufacturer in the Pilot Operating Handbook as a high wind condition.

(b) Briefing the passenger(s).

(c) Identifying hazards associated with a high wind landing.

(d) Selecting a landing site appropriate to high wind conditions.

(e) Using the vent/deflation system and burner controls appropriately to control ground travel.

Action:

The examiner/instructor will;

(a) Observe the candidate's demonstration of a high wind landing (if appropriate) within the selected area and determine that the candidate's performance meets the objectives.

(b) Question orally in depth on the aspects of a high wind landing if conditions do not facilitate a demonstration.

(c) Observe or question on the use of vents and burner controls to land the balloon and control ground travel in high winds.

High Wind Landing

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Cannot describe or does not nominate an appropriate area with consideration of the factors affecting a high wind landing	(1) Nominates (or describes) an appropriate area for a high wind landing	(1) Nominates an ideal area for a high wind landing in accordance with recommended procedures
(2) Does not brief the passenger(s) on the specific requirements of a high wind landing	(2) Ensures each occupant is briefed on the specific requirements of a high wind landing	(2) Ensures each occupant is thoroughly briefed and positioned in accordance with a high wind landing
(3) Does not prepare the vent/deflation system for use	(3) Prepares the vent/deflation system for use	(3) Prepares the vent/deflation system for use in accordance with the checklist
(4) Does not abort the approach when conditions are inappropriate and/or fails to minimise ground travel	(4) Uses the vent/deflation system and burner controls to minimise ground travel	(4) Uses the vent/deflation system and burner controls to eliminate ground travel
(5) Does not extinguish pilot lights and/or shut off fuel as applicable	(5) Extinguishes pilot lights, shuts off fuel as appropriate (critical element)	(5) Extinguishes pilot lights, shuts off fuel and vents lines in a timely manner (as appropriate)

ASSESSMENT CRITERIA

Task: Rapid ascent and descent

Objective:

To determine that the candidate has adequate knowledge of;

(a) Situations requiring the use of a rapid ascent and descent.

(b) The hazards of exceeding manufacturer's limitations.

(c) Potential problems with envelope distortions.

(d) Time and altitude required to recover from a rapid descent.

(e) Reasons for monitoring temperature control during a rapid ascent and descent.

Action:

The examiner/instructor will;

(a) Require the candidate to explain, in depth, the considerations of a rapid ascent and descent under hypothetical conditions and determine that the candidate's performance meets the objectives.

(b) Require the candidate to demonstrate a rapid descent and recover to stable flight on the examiner's command.

Rapid Ascent and Descent

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Cannot envisage any situation that would require the use of a rapid ascent or descent	(1) Adequately describes situations that would require the use of a rapid ascent and descent	(1) Demonstrates sound knowledge of situations that would require the use of a rapid ascent and descent
(2) Is unaware of the hazards associated with exceeding the manufacturer's limitations	(2) Understands the hazards of exceeding the manufacturer's limitations	(2) Demonstrates sound knowledge of the hazards of exceeding the manufacturer's limitations in a rapid ascent and descent
(3) Is unaware of the problems associated with envelope distortions	(3) Adequately describes the potential problems of envelope distortion	(3) Demonstrates sound knowledge of the problems of envelope distortion
(4) Grossly misjudges the time and/or altitude required to recover from a rapid descent	(4) Adequately estimates the time and altitude required to recover from a rapid descent	(4) Accurately determines the time and altitude required to recover from a rapid descent
(5) Is unaware of the reasons for monitoring temperature control during a rapid ascent and descent	(5) Adequately explains the reasons for monitoring temperature control during a rapid ascent and descent	(5) The candidate exhibits superior knowledge of the reasons for monitoring temperature control during a rapid ascent and descent
(6) Fails to timely regain stable flight on the examiner's command	(6) Uses the vent/deflation system and burner controls appropriately to regain stable flight on the examiner's command (**critical element**)	(6) Uses the vent/deflation system and burner controls appropriately and in a timely manner, to regain stable flight on the examiner's command

ASSESSMENT CRITERIA

Task: Contour flying

Objective:

To determine that the candidate is capable of;

(a) Using controls to maintain the desired height above terrain and obstacles, consistent with safety.

(b) Compensating for wind gusts, wind shear, thermal activity and orographic conditions.

(c) Avoiding over burning and over venting.

(d) Dividing attention between balloon control, ground track and lookout.

Action:

The examiner/instructor will;

(a) Nominate the height above ground level to be maintained (not below minimum safe height).

(b) Observe the candidate's contour flying procedures and determine that the candidate's performance meets the objectives.

(c) Place emphasis on the candidate's situational awareness and ability to divide attention.

Contour Flying

Rating 70 85 100

Not yet competent	COMPETENT	Ideal
(1) Cannot maintain a constant height within 100 feet and/or compromises minimum safe height	(1) Maintains a constant height above terrain within 100 feet	(1) Accurately maintains a constant height above terrain
(2) Does not compensate for wind, thermal activity and/or orographic conditions	(2) Adequately compensates for wind gusts, wind shear, thermal activity and orographic conditions	(2) Maintains a high level of situational awareness compensating for wind gusts, wind shear, thermal activity and orographic conditions
(3) Consistently uses over burning and/or over venting	(3) Avoids over burning and over venting	(3) Uses burners and vents judiciously to maintain precision flight
(4) Fails to divide attention adequately between track, terrain and lookout	(4) Divides attention adequately between track, terrain and lookout	(4) Maintains a high level of situational awareness whilst dividing attention between track, terrain and lookout

ASSESSMENT CRITERIA

Task: Obstacle avoidance

Objective:

To determine that the candidate has adequate knowledge of;

(a) The importance of timely recognition of obstacles, particularly power lines.

(b) Techniques for avoiding obstacles.

(c) The procedure to be used if collision is imminent.

(d) The procedure to be used post collision.

Action:

The examiner/instructor will;

(a) Require the candidate to explain the considerations of situational awareness for obstacle avoidance (or demonstrate if applicable), with emphasis on the procedure to be used if collision is imminent (especially with wires) and the post contact procedures to be followed, to determine that the candidate's knowledge meets the objectives.

Obstacle Avoidance

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Is unaware of the importance of timely recognition of obstacles, particularly power lines	(1) Demonstrates knowledge of the importance of timely recognition of obstacles, particularly power lines	(1) Demonstrates a high level of situational awareness in relation to obstacles, particularly power lines
(2) Is unaware of the techniques for avoiding obstacles	(2) Describes in depth the techniques for avoiding obstacles	(2) Demonstrates a high level of situational awareness through the application of techniques for avoiding obstacles
(3) Is unaware of the recommended procedure to be adopted if a collision is imminent	(3) Describes in depth the procedure to be used if a collision is imminent	
(4) Is unaware of the recommended procedure to be adopted after a collision with an obstacle	(4) Describes fully the procedure to be used after a collision with an obstacle	

ASSESSMENT CRITERIA

Task: Tethering

Objective:

To determine that the candidate has adequate knowledge of;

(a) The recommended tethering procedure, including the number, strength and location of lines.

(b) The size of the area required considering wind conditions and obstructions.

(c) The effects of false lift and wind gusts.

(d) The importance of briefing the ground crew on tethering procedures and crowd control.

Action:

The examiner/instructor will;

(a) Question or observe (as applicable) the candidate's tethering procedures in accordance with the aircraft's flight manual and determine that the candidate's performance meets the objectives.

(b) Nominate simulated wind conditions and/or obstructions and determine that the candidate's knowledge of the area required for tethering under those conditions meets the objectives.

(c) The examiner may act as ground crew and assess the candidate's briefing of tethering procedures and crowd control to further determine that the candidate's knowledge meets the objectives.

Tethering

Rating 70	**85**	**100**
Not yet competent	**COMPETENT**	**Ideal**
(1) Incorrectly describes or demonstrates (as applicable) the flight manual tethering procedure, affecting safety	(1) Demonstrates adequate knowledge of the tethering procedure in accordance with the aircraft's flight manual	(1) Demonstrates a sound knowledge of tethering procedures in accordance with the aircraft's flight manual
(2) Cannot estimate, or grossly underestimates the size of the area required considering the simulated wind conditions and/or obstructions	(2) Demonstrates adequate knowledge of the size of the area required considering the simulated wind conditions and/or obstructions	(2) Accurately determines the area required under the simulated conditions
(3) Cannot explain the effects and/or the precautions to be taken in relation to the effects of false lift and/or wind gusts	(3) Understands the effects of false lift and wind gusts on tethering	(3) Demonstrates a thorough understanding of the effects of, and the precautions to be taken, with regard to false lift and/or wind gusts
(4) Does not or cannot effectively brief the ground crew on tethering procedures and crowd control	(4) Effectively briefs the ground crew on tethering procedures and crowd control	(4) Thoroughly briefs the ground crew on tethering procedures and crowd control

ASSESSMENT CRITERIA

Task: Threat and error management

Objective:

To ensure that the candidate:

(a) Exhibits competent threat and error management techniques during the demonstration.

Action:

The examiner will:

(a) Assess the candidate's threat and error management techniques through observation of situational awareness, decision making and human factors considerations.

(b) Simulate operational and/or systems failures (as appropriate) to assess the candidate's threat and error management.

(c) Orally question (as required) the candidate's decision making process to assess threat and error management.

Threat and Error Management

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) The candidate's situational awareness is compromised and/or not applied to the operational situation (as simulated if applicable)	(1) The candidate exhibits a competent level of situational awareness in relation to the operation (as simulated if applicable)	(1) The candidate exhibits a high level of situational awareness with emphasis on operational factors
(2) The candidate's knowledge of human factors is inadequate and/or not applied to the operation	(2) The candidate exhibits a competent level of human factors in those factors relevant to the operation	(2) The candidate exhibits superior knowledge of human factors, particularly those relevant to the operation
(3) The candidate's decision making process cannot be evaluated or clearly ignores available information, especially any information related to the operation	(3) The candidate verbalises the decision making process and highlights any decision influenced by the operational environment	(3) The candidate verbalises the decision making process with emphasis on any decision influenced by the operational environment

ASSESSMENT CRITERIA

Task: Navigation

Objective:

To determine that the candidate;

(a) Identifies lateral and vertical airspace restrictions (as appropriate).

(b) Verifies the aircraft's position at all times.

(c) Uses the aircraft's radio to communicate clearly and concisely.

(d) Determines the duration of the flight considering the availability of suitable landing areas, fuel consumption, wind and obstacles.

(e) Analyses the difference between planned flight and the actual flight.

Action:

The examiner/instructor will;

(a) Observe the candidate's navigation procedures and determine that the candidate's performance meets the objectives.

(b) Question the candidate (as appropriate) on the aircrafts position and endurance to confirm the candidate's procedural knowledge.

(c) Assess the comprehensiveness of the candidate's analyses of the difference between the planned flight and the actual flight to determine that cause and effect are identified.

Navigation

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Fails to identify airspace restrictions and/or enters or would enter (without examiner intervention) controlled airspace without a clearance	(1) Identifies lateral and vertical airspace restrictions (as applicable)	(1) Demonstrates a high level of situational awareness in relation to airspace restrictions with inadvertent penetration of controlled airspace never at risk
(2) Cannot verify the aircraft's position when requested by the examiner	(2) Is aware of the aircraft's position at all times	(2) Demonstrates a high level of situational awareness in relation to the aircraft's position at all times
(3) Adopts a non-assertive, excessively assertive or verbose communication style	(3) Communicates in an adequately assertive manner	(3) Communicates in an appropriately authoritative and assertive manner
(4) Miscalculates flight duration such that safety is compromised	(4) Determines the duration of the flight considering the availability of suitable landing areas, fuel consumption, wind and obstacles	
(5) Cannot establish the cause and effect resulting in the difference between the planned flight and the actual flight	(5) Adequately assesses the difference between the planned flight and the actual flight and satisfactorily identifies the cause and effect	(5) Accurately assesses the difference between the planned flight and the actual flight and clearly identifies the cause and effect

ASSESSMENT CRITERIA

Task: Lookout (critical task)

Objective:

To determine that the candidate;

(a) Maintains the correct scanning technique both on the ground and in the air for collision avoidance and separation from other aircraft (**critical element**).

(b) Remains in VMC to comply with Visual Flight Rules (**critical element**).

(c) Maintains situational awareness (**critical element**).

Action:

The examiner/instructor will;

(a) Observe the candidate's performance and determine that it meets the objectives.

(b) Require the candidate to report on the position of other aircraft.

Lookout

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Lookout grossly deficient – examiner needs to intervene	(1) Maintains an adequate lookout (**critical element**)	(1) Maintains a continuous and systematic lookout both on the ground and in the air
(2) Demonstrates a lack of knowledge in the application of VMC for VFR or would enter cloud without examiner intervention	(2) Maintains VMC in accordance with the minimum requirements for VFR (**critical element**)	(2) Maintains VMC to ensure VFR flight at all times
(3) Pays little attention to situational awareness with no idea of the relative position of other traffic	(3) Maintains an adequate level of situational awareness (**critical element**)	(3) Maintains a high level of situational awareness by building a mental picture of the relative position of all traffic which may potentially affect the flight

ASSESSMENT CRITERIA

Task: Systems and equipment malfunctions

Objective:

To determine that the candidate;

(a) Has adequate knowledge of systems and equipment by demonstrating (if applicable) or explaining (at examiner discretion) pilot actions in the event of:-

- Pilot light flameout or failure
- Blast valve failure
- Fuel exhaustion
- Fuel leak and/or fire
- Any other malfunction relevant to the balloon type.

Action:

The examiner/instructor will;

(a) Simulate and/or question on appropriate systems and equipment failures and determine that the candidate's performance meets the objective.

Systems and Equipment Malfunctions

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Fails to respond to an in-flight situation that threatens the safety of the aircraft	(1) Demonstrates adequate knowledge of the procedure to adopt in the event of pilot light flameout and/or failure	(1) Demonstrates a sound knowledge of the procedure to adopt in the event of pilot light flameout and/or failure
(2) Fails to respond to an in-flight systems failure that threatens the safety of the aircraft	(2) Demonstrates adequate knowledge of the procedure to adopt in the event of blast valve failure	(2) Demonstrates a sound knowledge of the procedure to adopt in the event of blast valve failure
(3) Fails to respond to an in-flight situation that threatens the safety of the aircraft and/or permits fuel exhaustion to occur	(3) Demonstrates adequate knowledge of the procedure to adopt in the event of fuel exhaustion	(3) Demonstrates a sound knowledge of the procedure to adopt in the event of fuel exhaustion
(4) Fails to respond to an in-flight situation that threatens the safety of the aircraft	(4) Demonstrates adequate knowledge of the procedure to adopt in the event of a fuel leak and/or fire	(4) Demonstrates a sound knowledge of the procedure to adopt in the event of a fuel leak and/or fire
(5) Fails to respond to an in-flight situation that threatens the safety of the aircraft and/or makes ill-informed and/or ill-considered decisions in relation to flight safety	(5) Adequately responds to in-flight situations that threaten the safety of the aircraft	(5) Promptly and appropriately responds to any situation that threatens the safety of the aircraft

ASSESSMENT CRITERIA

Task: Emergency equipment and survival gear

Objective:

To determine that the candidate;

(a) Has adequate knowledge of emergency equipment and survival gear by demonstrating or explaining its:-

- Location and purpose
- Method of operation or use

(b) Has adequate knowledge of survival equipment appropriate to various climates and types of terrain within the Pacific region.

Action:

The examiner/instructor will;

(a) Simulate an event that requires a demonstration and/or question on the location, purpose and method of operation of emergency equipment and determine that the candidate's performance meets the objective.

(b) Discuss survival equipment appropriate to any area within the Pacific region to determine that the candidate's performance meets the objective.

Emergency Equipment and Survival Gear

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Cannot locate and/or explain the purpose and/or method of operation of emergency equipment on board	(1) Demonstrates adequate knowledge of the location, purpose and method of operation of emergency equipment	(1) Demonstrates a sound knowledge of the location, purpose and method of operation of emergency equipment
(2) Specifies survival equipment that is inappropriate to the area under discussion within the Pacific region	(2) Demonstrates adequate knowledge of survival equipment appropriate to the Pacific region	(2) Demonstrates a sound knowledge of survival equipment and techniques appropriate to the Pacific region

ASSESSMENT CRITERIA

Task: Flight over water

Objective:

To determine that the candidate has adequate knowledge of;

(a) Wind and current effects.

(b) The preparations required for over flight and/or contact with water including briefing the passengers.

(c) The procedure to be followed after water contact.

(d) The CAR's relating to required equipment for flight over water.

Action:

The examiner/instructor will;

(a) Question the candidate on the effects of wind and current on a water landing and determine that the candidate's knowledge meets the objective.

(b) Question the candidate on the preparations required for over flight and contact with water, including the passenger briefing and determine that the candidate's knowledge of procedures meets the objective.

(c) Question the candidate on the procedure to be followed after contact with water and determine that the candidate's knowledge of procedures meets the objective.

(d) Question the candidate on the Rule requirements for flight over water.

Flight over water

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Is unaware of how wind and current will affect a landing on water	(1) Adequately explains the effects of wind and current on a water landing	(1) Demonstrates a sound knowledge of the effects of wind and current on a water landing
(2) Is unaware of the preparations required for flight over water and/or a water landing and/or fails to brief the passengers	(2) Adequately explains the preparations required for over flight and a water landing and briefs the passengers appropriately	(2) Demonstrates a sound knowledge of the preparations required for flight over water, water landing and briefs the passengers thoroughly
(3) Omits actions from the recommended procedure to be followed after contact with water	(3) Adequately explains the recommended procedure to be followed after contact with water	(3) Demonstrates a sound knowledge of the recommended procedure to be followed after a water landing
(4) Is unaware of the Rule requirements for flight over water	(4) Adequately explains the Rule requirements for flight over water	(4) Demonstrates a sound knowledge of the Rule requirements for flight over water

ASSESSMENT CRITERIA

Task: Thermal flight

Objective:

To determine that the candidate has adequate knowledge of:

(a) The conditions that can cause thermal activity.

(b) The effects of thermal activity on balloon flight.

(c) The recommended procedures to follow on encountering thermal activity.

Action:

The examiner/instructor will;

(a) Question the candidate on the conditions that cause thermal activity and the effect on balloon flight to determine that the candidate's level of knowledge meets the objectives.

(b) Question the candidate on the recommended procedures to be followed in thermal activity to determine that the candidate's knowledge meets the objectives.

Thermal Flight

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Cannot describe and/or does not recognise conditions which cause thermal activity	(1) Demonstrates adequate knowledge of the cause of thermal activity	(1) Demonstrates a sound knowledge of, and readily recognises, the conditions which cause thermal activity
(2) Cannot describe the effects of thermal activity on balloon flight	(2) Demonstrates adequate knowledge of the effects of thermal activity on balloon flight	(2) Demonstrates a sound knowledge of the effects of thermal activity on balloon flight
(3) Fails to respond to an in-flight situation that threatens the safety of the aircraft and/or omits actions from the recommended procedure for flight in thermal activity	(3) Demonstrates adequate knowledge of the procedure to adopt in the event of encountering thermal activity	(3) Demonstrates a sound knowledge of the procedure to adopt in the event of encountering thermal activity

ASSESSMENT CRITERIA

Task: Recovery

Objective:

To determine that the candidate has adequate knowledge of:

(a) The elements of recovery.

(b) The landing site approval process (as applicable).

(c) Ground crew supervision including vehicle and crowd control.

(d) The importance of minimizing property damage.

Action:

The examiner/instructor will;

(a) Observe the candidate's recovery procedures and determine that the candidate's performance meets the objectives.

(b) Question the candidate on the elements of recovery not demonstrated to determine that the candidate's performance meets the objectives.

Recovery

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Cannot describe recovery procedures and/or omits actions that compromise the safety of the aircraft or persons nearby	(1) Demonstrates adequate knowledge of recovery procedures	(1) Demonstrates a sound knowledge of recovery procedures and a high level of situational awareness
(2) Makes no effort to contact the land owner	(2) Makes appropriate efforts to gain land owner approval for landing	(2) Gains land owner approval prior to landing

ASSESSMENT CRITERIA

Task: Deflation and pack up

Objective:

To determine that the candidate has adequate knowledge of:

(a) The elements of deflation and pack up.

(b) Fuel system security.

(c) Envelope deflation, considering wind and obstacles.

(d) The disassembly, packing and storage of the envelope, basket components and fuel system as applicable.

(e) The use of an appropriate checklist and post flight inspection procedures.

(f) Passenger supervision and control.

Action:

The examiner/instructor will;

(a) Observe the candidate's recovery procedures and determine that the candidate's performance meets the objectives.

(b) Question the candidate on post flight procedures as appropriate to determine that the candidate's knowledge meets the objectives.

Deflation and Pack Up

Rating_____70_____85_____100

Not yet competent	**COMPETENT**	**Ideal**
(1) Compromises safety of the aircraft, the ground crew and/or bystanders during the deflation process	(1) Demonstrates adequate knowledge of deflation procedures including passenger control and supervision	(1) Demonstrates a sound knowledge of deflation procedures and high situational awareness in relation to the safety of the ground crew, passengers and bystanders
(2) Compromises safety of the aircraft through incorrect procedures during the disassembly, packing and storage of the envelope, basket components and/or fuel system	(2) Demonstrates adequate knowledge of the disassembly, packing and storage of the envelope, basket components and fuel system as applicable	(2) Demonstrates a sound knowledge of the procedure for disassembly, packing and storage of the envelope, basket components and fuel system
(3) Compromises safety through the use of an inappropriate checklist and/or inadequate post flight inspection	(3) Uses an appropriate checklist and conducts an adequate post flight inspection	(3) Demonstrates a sound knowledge of post flight inspection procedures with direct reference to the manufacturer's checklist

ASSESSMENT CRITERIA

Task: Refuelling

Objective:

To determine that the candidate has adequate knowledge of:

(a) The properties of various fuels.

(b) Fuel cylinders and related parts.

(c) Safety considerations.

(d) The risk of explosion and burns.

(e) Moisture contamination.

(f) The method of filling cylinders.

Action:

The examiner/instructor will;

(a) Question the candidate on refuelling procedures to determine that the candidate's level of knowledge meets the objectives.

Refuelling

Rating_____70_____85_____100

Not yet competent	COMPETENT	Ideal
(1) Cannot describe refuelling precautions and/or compromises safety during the refuelling process	(1) Demonstrates adequate knowledge of the properties of various fuels, cylinders and related parts; contamination by moisture, the method of filling cylinders, safety considerations and the risk of explosion and burns	(1) Demonstrates a sound knowledge of refuelling procedures with a high regard for safety