Safety & Airspace Regulation Group

Flight Operations

UK CAA Standards Document 10(H) Version 4

Guidance for Helicopters Instructors undergoing the Assessment of Competence

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LIST OF AMENDMENTS

Number	Version	Date	Reason for amendment	List of affected pages
0	4	09/05/2021	Initial issue	All

FOREWORD

This document sets out the guidance for applicants taking the Assessment of Competence (AoC) for the issue, revalidation or renewal of a helicopter Flight Instructor (FI), Type Rating Instructor (TRI) or Instrument Rating Instructor (IRI) Certificate. The information will help an applicant prepare for the flight test; however, it should be noted that the information is of a general nature only and does not give precise details of each exercise or manoeuvre.

The Civil Aviation Authority (CAA) is the competent authority of the UK for the issue of pilot licences, ratings and certificates in accordance with the ANO 2016. Nothing in this document is intended to conflict with UK statute law where applicable. Whilst every effort is made to ensure that all information is correct at the time of publication, the CAA reserves the right to amend this document as required to accommodate changes to the primary authority documents and to correct errors and omissions or to reflect changes in national policy and best practice.

References to EU regulations are to those regulations as retained and amended in UK domestic law under the European Union (Withdrawal) Act 2018.

Throughout this document the following editorial practices and definitions shall apply:

- "Shall" and "Must" are used to indicate a mandatory requirement.
- "Expect" and "Should" are used to indicate strong obligation.
- "May" is used to indicate discretion.
- "Examiner" is used to indicate a person who holds a valid examiner authorisation certificate issued by the UK CAA. Where the certificate was not issued by the UK CAA, has received a briefing from the UK CAA in accordance with FCL.1015 to conduct the appropriate assessment/proficiency check.
- "Applicant" is used to indicate a person who is seeking the issue, revalidation or renewal of a pilot licence, certificate or certificate.

All amendments to this document will be notified via SkyWise. This document and other CAA Standards Documents are available on the CAA web site www.caa.co.uk/standardsdocuments and can be downloaded to users without charge. The CAA Scheme of Charges and application and report forms are also available from the www.caa.co.uk

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PART 1 GENERAL REQUIREMENTS

1.1 Flight Test Preparation

1.1.1 An applicant for an instructor AoC shall have successfully completed all the CPL (H) or ATPL (H) Theoretical Knowledge examinations (or be credited with them), have completed all the flight and ground training stated in Part FCL Section J and have a Recommendation for Test issued by the ATO responsible for the conduct of the training.

1.1.2 An examiner shall be designated for the skill test by the CAA examiner designation process. Once designated the applicant should contact the examiner prior to the test date to confirm the test administrative details such as:

(i) Date, time, and place of AoC.
(ii) Provision of a suitably equipped helicopter with appropriate insurance cover.
(iii) Subject and arrangements for the test lecture (which should be advised with no more than 5 days' notice before the AoC).
(iv) Administrative arrangements including presentation of training records, application, and assessment forms.
(v) Flight assessment fees and expenses including arrangements in case of cancellation.

1.1.3 An instructor AoC can be very demanding. Appendix 6 of this document provides guidance on managing and reducing stress for applicants undergoing tests.

1.2 Documentation

1.2.1 The following applicant's documentation will be required to be produced on the test day:
Recommendation for Test issued by the ATO

(i) Completed instructor application form
(ii) Medical certificate
(iii) Pilots flying logbook
(iv) Training records
(v) Photographic ID
(vi) Flight Radio Telephony Operator Licence or RT practical test evidence

If the medical certificate is out of date the examiner may still conduct the test, however the applicant should be aware that, regardless of the outcome, they will not be issued a certificate until the medical certificate is revalidated.

1.2.2 Applicants who have previously attempted the AoC must produce to the examiner the previous test result form, SRG 1177, and form SRG 2129 that indicates the reasons for failure, and the re-training requirement. The applicant will also have evidence of the retraining conducted and have a new Recommendation for Test from the ATO responsible for the training.

1.3 Provision of Helicopters

1.3.1 The applicant or training organisation must provide a suitably equipped helicopter for the AoC capable of conducting all the elements of the AoC, including OEI operations for MEH and simulated engine off landings for SEH. The helicopter must have a valid UK certificate of airworthiness, certificate of registration, insurance, radio licence, and weight balance schedule.

1.3.2 Part-21 aircraft operated by a flight training establishment performing remunerated tests and checks must meet the requirements of Commission Regulation No. 1321/2014 Annex Vb (Part-ML) ML.A.201(e) or Annex I (Part-M) M.A.201(h), as retained in UK law by the European Union (Withdrawal) Act 2018. Aircraft must hold a Certificate of Airworthiness with a valid Airworthiness Review Certificate and be maintained in an airworthy condition in accordance with the AMP. Maintenance and continuing airworthiness management must be performed by approved organisations i.e. Part-145, Part-M Subpart F, or Part-CAO (with maintenance privileges) for maintenance and Part-CAMO, Part-CAO, or Part-M Subpart G for continuing airworthiness management. Group or privately-owned Part-21 aircraft may only be used for remunerated tests and checks on the basis that the aircraft is maintained by an approved organisation (for example,

contracted to a CAMO or CAO).

1.3.3 Flight tests and training in aircraft registered outside UK or UK Dependent Territories are subject to both airworthiness and licensing restrictions. If 'valuable consideration' is to be given to the examiner, then the aircraft is subject to ANO 2016 Article 252. Prior to undertaking such a flight, the operator of the foreign registered aircraft will be required to obtain an operating permit. Further information is available at www.caa.co.uk/foreigncarrierpermits or by e mail to foreigncarrierpermits@caa.co.uk or by telephoning 03301 383484 (office hours only). In addition, before acting as pilot-in-command of a foreign registered aircraft, the licensing requirements of the state of registration must be met in accordance with ANO 2016 Art 148. For example, in the case of EASA member state aircraft, a valid EASA pilot licence or validation is required.

1.3.4 The helicopter must be fitted with duplicate primary flying controls for use by the applicant and examiner. Flight, engine and associated ancillary instruments as required by ANO Schedule 4 and 5. Instruments must be readily visible to both the examiner and the applicant. Wheel brakes, undercarriage controls, engine controls, fuel controls and cabin fire extinguishers must be either duplicated or positioned so that they are accessible to both the examiner and applicant.

1.3.5 Helicopters must be equipped with a VHF Transceiver and two-way inter-communication using headsets must be fitted for use by the examiner and applicant. Navigation equipment should be installed including at least one VOR or ADF or GNSS (PPL skill test only). GNSS equipment where fitted, must have the latest software and an up to date map database for use during the skill test.

1.3.6 A stop-watch or other suitable timing device should be provided for use by the applicant. This may be part of the helicopter equipment or provided separately.

1.3.7 A means of screening from external reference must be provided to simulate flight by sole reference to instruments where required by the test. Head worn visors or goggles may be used for this purpose.

1.4 Aerodrome

Under the provisions of ANO 2016 (as amended), instruction in flying and carrying out flight assessments can take place at an unlicensed aerodrome if using helicopters/gyroplanes with a maximum total weight authorised not exceeding 3175 kg. However, it is a condition of Article 209 that both the operator of such an aerodrome and the commander of the aircraft are satisfied on reasonable grounds that the aerodrome has adequate facilities for the safe conduct of such flights. CAP 793, Safe Operating Practices at Unlicensed Aerodromes, contains guidance on what constitute adequate facilities. Examiners must satisfy themselves that aerodromes are suitable for the conduct of flight assessment and should not undertake a flight assessment where it is apparent that the guidance in CAP 793 and the requirements of Part-ORA, ORA.ATO.140 has not been met.

PART 2 CONDUCT OF INSTRUCTOR ASSESSMENT OF COMPETENCE

2.1 Instructor Competencies and Assessment Profile

2.1.1 This part is common to all instructor assessments and the format shall be followed for all applicants. It is appreciated that when conducting an instructor revalidation on an experienced and competent Instructor that the examiner may decide to abridge, condense, or adapt the assessment format. However, the assessment flight should not be less than 60 minutes.

2.1.2 In accordance with Part FCL 920 all instructors shall be trained and assessed in the following competences (see Appendix 5 for assessment criteria):

(i) Prepare resources,
(ii) Create a climate conducive to learning,
(iii) Present knowledge,
(iv) Integrate Threat and Error Management (TEM) and CRM,
(v) Manage time to achieve training objectives,
(vi) Facilitate learning,
(vii) Assess trainee performance,
(viii) Monitor and review progress,
(ix) Evaluate training sessions,
(x) Report outcome.

2.1.3 The instructor AoC is divided into seven main sections as follows:

Section 1 Lecture and Theoretical Knowledge Oral
Section 2 Pre-Flight Briefing
Section 3 Flight
Section 4 Mandatory Exercises
Section 5 Multi Engine (where applicable)
Section 6 Instrument Exercises (where applicable)
Section 7 Post Flight Debriefing

(Note**:** The examiner will precede the AoC with an examiners AoC briefing and conclude with a debrief prior to completing the required administrative action).

2.1.4 An Instructor AoC is intended to be conducted in its entirety on one day. However, in extenuating circumstances and if agreed between the applicant and the examiner it may be conducted over 2 days, but the assessment must be completed within 6 months of commencement.

2.1.5 If the assessment is completed in two parts, both parts shall be conducted by the same examiner. The overall result of the attempt shall not be assessed or recorded until all sections have been completed. Each part of the attempt shall be recorded on separate assessment record forms and clearly marked with the attempt/series number. All forms are to be kept for 5 years and presented to an Inspector of the Authority on request.

2.1.6 The typical sequence in which the assessment sections will normally be conducted with their approximate durations for an **initial issue** assessment are:

Assessment Admin and Examiners Brief:	30 minutes
Pre-Flight Exercise Briefing (Section 2):	30-45 minutes
Flight (Section 3/4/5/6 as req.):	60-90 minutes
Post Flight Debrief (Section 7):	30 minutes
Lunch	
Applicants Test Lecture:	30-45 mins
Theoretical Knowledge (Section 1):	1.5- 2 hours (FI/IRI only)
Examiners Debrief and Admin:	30 minutes

(**Note:** This sequence is subject to the normal rigors of weather, aircraft, classroom availability and para 2.1.1).

2.1.7 The applicant shall present to the examiner the following equipment and documentation which

prior to the assessment:

(i) Personal flying logbook,
(ii) An UK medical certificate,
(iii) A UK licence (or ICAO current and valid licence with Instructor Certificate/Rating for a conversion of a 'Third Country' Instructor Certificate),
(iv) A form of identity including a photograph, e.g. a valid passport or ID card,
(v) A valid Certificate of Course Completion and a written Recommendation for Test from an ATO,
(vi) Evidence of successful completion of all theoretical knowledge examinations,
(vii) Appropriate helicopter technical and insurance documents,
(viii) Two headsets, examiners may carry their own headset, but a spare unit should be available for the flight,
(ix) Two copies of the authorised helicopter check list,
(x) Instrument flying screens, visors or goggles (as applicable),
(xi) Current publications for the routing and airfields (as applicable),
(xii) Planning material including a blank flight log, map and navigation equipment (as applicable),
(xiii) A stopwatch or timepiece,
(xiv) Any relevant CAA correspondence such as a letter of assessment or retraining requirements.

2.2 Examiner Assessment and Administration Brief

2.2.1 At the pre-arranged time the examiner will meet the applicant for the assessment briefing. At the briefing the examiner will ensure that the applicant has completed the necessary training and experience requirements for the assessment. The examiner will then give a comprehensive briefing covering all aspects of the assessment. During the briefing the applicant should ask questions at any time if they are unclear about any aspect. The examiner will present the applicant with a summary or plan which will include the following:

(i) ***The Purpose of the Flight.***
The purpose of the flight is for the applicant to demonstrate their ability to give instruction on the ground and in the air to a student to the level of competence as required by Part FCL Subpart J. Throughout the AoC the following practical elements will be assessed in addition to those items listed at para 2.1.2:

- Ability as an Instructor to impart knowledge and skill.
- Flying ability/accuracy/demonstrations/airmanship/efficient use of time and airspace.
- Knowledge of teaching exercises and their sequencing.
- Student involvement.
- Accuracy and synchronisation of 'patter.'
- Technical knowledge and standardisation of exercises.
- Analysis and correction of faults.

(ii) ***Responsibilities***
The examiner will explain that all the duties and decisions necessary for the safe and practical conduct of the flight, in accordance with current legislation, will be the responsibility of the applicant. The applicant should liaise with ATC but if ATC instructions conflict with the briefing these will take priority; the examiner will only intervene if they decide to do so for reasons of safety or clarification. The applicant is asked to assume that the examiner is a student pilot and therefore the applicant is to expect only limited assistance from the examiner.

(iii) ***Checklists***
The examiner will explain that throughout the flight the applicant will be expected to use the approved helicopter checklist. The applicant is to be asked to assume that the assessment is the first flight of the day and will be expected to carry out a pre-flight inspection explaining to the 'student' what they are doing and why. Airborne checks may be completed from memory, or from alternative notes, but must be in accordance with the checklist and each check item spoken aloud.

(iv) ***Weather Minima***

Applicants shall comply with the minimum weather conditions specified in their Training Organisation's Flying Order Book or Operations Manual, or other more stringent limitations if applicable (e.g. Aircraft/State Minima). However, when extreme conditions of high wind speed, severe turbulence, icing, or thunderstorms exist, the examiner may determine that this would make the flight difficult to assess and may override the applicant's willingness to proceed.

(v) ***Planning Check***

The examiner will assess the applicant's planning prior to the flight during Section 3 of the assessment. They will expect to be briefed by the applicant as to the environmental/weather/aircraft suitability prior to the flight exercise and make a decision whether to proceed with the flight. In arriving at this decision, the applicant must consider the requirements of all the sections of the assessment. The examiner may question the applicant on any aspect of the planning, for example: choice of operating areas, altitudes, fuel planning, NOTAMS, Mass & Balance and Performance calculations etc.

(vi) ***The Profile***

The examiner will detail the assessment sequence. They will nominate the main flight exercise to be briefed and flown, along with any secondary and mandatory flight exercises to be assessed in the flight. They will explain that for the assessment the examiner will play the part of a student pilot of average ability, who has completed all the elements of the course prior to the lesson being taught for the skill assessment, including any pre lesson study as prescribed by the applicant. During the briefing, the examiner will regularly check if the applicant has any questions and finally will ask the applicant if they are quite clear what is required of them during the assessment.

(vii) ***Definitions of Terms to be used***

The examiner will explain and ascertain the applicants understanding of the following definitions to be used in the assessment:

- If asked to **'demonstrate**' a manoeuvre the applicant should fly the exercise as a demonstration of flying skill.
- If asked to **'patter'** an exercise the applicant should talk through as they fly the manoeuvre or exercise, bringing out any relevant teaching points but without breaking the exercise down into a lesson or giving student practice.
- If asked to **'teach'** an exercise or manoeuvre the applicant is to break down the exercise into its' relevant parts and devise a lesson, giving the student time to practice and noting or correcting any faults that they might have.

(viii) ***Helicopter Control***

The helicopter must be operated in accordance with the Aircraft Flight Manual or Pilots Operating Handbook as appropriate, and the operating procedures should follow those given in the ATO's Flying Order Book or Operations Manual.

(ix) ***Emergencies and Abnormal Conditions***

The examiner will discuss the actions necessary should any actual emergency or abnormal condition occur during the flight. In general, the handling pilot is to remain at the controls and handle any emergency but the examiner, as the PIC, may elect to take control at any stage.

(x) ***Simulated Emergencies***

The examiner will brief on how they will initiate simulated emergencies including how any throttle/power control levers are to be manipulated.

(xi) ***Oral Questioning***

The examiner may ask practical questions relating to the flight on subjects such as VFR procedures, helicopter performance and technical aspects, emergency handling and the helicopter documents.

(xii) ***Examiner Notes***
Throughout the assessment it will be necessary for the examiner to make full notes to complete the examiner's report form and so that an effective and thorough debriefing may be achieved. Examiners should do this as unobtrusively as possible, explaining that this is normal practice and that it should not give rise to concerns.

2.3 Flight Exercise Briefing

2.3.1 The examiner will designate the nominated the main flight exercise, to be briefed and taught during the briefing at para 2.2.

2.3.2 Normally the flight exercise will be selected from the appropriate training syllabus and it should be assumed that the student has completed all exercises that preceded the exercise to be taught.

2.3.3 The applicant will be expected to give a pre-flight briefing lasting 30-40 minutes depending upon the sequence. The normal medium for this brief is the whiteboard. Applicants may use computer generated, flipchart or OHP briefing material but should be prepared to provide their own presentation equipment.

2.3.4 The pre-flight briefing should explain the sequence of the flight including any refreshing of previous exercises and TEM/airmanship points applicable at this stage of training.

2.3.5 The applicant is expected to display the ability to 'build' a flight exercise in stages using a logical sequence of teaching and learning of the air exercise to ensure student understanding. Applicants may use any pre-prepared notes or material but must demonstrate a sound knowledge of the exercises rather than read directly from notes. Applicants should be able to demonstrate the ability to evaluate a 'student's' progress and understanding and, if necessary, adjust teaching methods. Consideration should be given that an exercise may be taught in different way and an individual style to achieve the required understanding.

2.3.6 The examiner may wish to take notes during the briefing and any flipchart or whiteboard presentations should be retained for reference on the examiner's report form and used during the de-briefing.

2.3.7. In addition to the competences assessed at para 2.1.2 examiners must assess the following items in this section:

- Visual Presentation and Content.
- Technical Accuracy.
- Clarity of Explanation.
- Clarity of Speech.
- Instructional Technique.
- Use of Models and Aids.
- Student Participation.

2. 4 The Flight Assessment Section

2.4.1 ***Pre-Flight brief***
Prior to the flight the applicant will be given time to collect the latest planning information. They will then be expected to give the 'student' a short pre-flight briefing (10-15 minutes) on the **practical application of conducting the designated flight exercise, given the individual aircraft and environmental conditions of the day**. This pre-flight briefing should contain at least the following items (the MATED brief is only included as a suggested aide memoir):

Met	How the given met conditions are going to affect the delivery of the flight exercise i.e. cloud base, visibility/horizon, wind velocity, temp/dew point, precipitation etc.
Aircraft	AUM (performance), CoG (t/o & landing calculation) fuel load (flight time), tech log details (limitations/hours available), ac documentation.
A**T**C	Airfield details, NOTAMS, Royal Flights, RT services, Navaids, Airspace.
Exercise	How the exercise is to be sequenced to be most efficient. Given the experience

level of the student -who is going to be starting the aircraft, who flies to the exercise area, any revision of previous lesson, etc.

Duties Division of crew responsibilities for radio/lookout/monitoring etc.

2.4.2 ***Pre-Flight Inspection***

The examiner will assess the applicant's technical knowledge by asking them to carry out a demonstration of practical pre-flight inspection of the helicopter, assuming it is the first flight of the day and with conducted with reference to the approved checklist. Where visual checks are made these should be described. Pre-flight checks of the radio and navigation equipment should include all the equipment that the applicant proposes to use during the flight.

2.4.3 ***Main Flight Exercise***

The first part of the flight will concentrate on the ability of the applicant to teach the flight exercise as briefed in the classroom. Once established in a suitable training area the applicant should complete the training sequence as previously briefed. The examiner will act according to the instructions given and although they must not set deliberate traps, they should act as a normal student and make mistakes particularly if the teaching or the instruction is not clear. It is also important that the examiner is consistent in the responses, so that once any element is mastered by the 'student', mistakes within that element should no longer occur. The main training exercise should be completed in full. The applicant should not be allowed to cut short any of the sequence just because the examiner is acting as the student.

2.4.4 ***Secondary Flight Exercises***

After completion of the main teaching exercise, the examiner will then direct the flight to cover the other pre briefed flight exercises. These manoeuvres may be required as teaching exercises in which case the examiner will act as the student, or as a demonstration of the applicant's helicopter handling ability. If set as a demonstration, the Instructor may still be expected to talk through or 'patter' the exercise as it is flown, but the examiner will not be expected to repeat as the student. Nevertheless, the examiner should take careful note of the 'patter' and accuracy of the manoeuvres including safety and airmanship.

2.4.5 ***Mandatory Exercises (where applicable)***

If the flight assessment requires mandatory manoeuvres such as engine off landings for SEH then these exercises should be completed. It may be necessary to accomplish this on a separate flight. (Note for an FI assessment, a full engine off landing to the ground shall be demonstrated. The following will be assessed throughout the flight by the examiner:

- Arrangement of demonstration.
- Synchronising of speech/demonstration.
- Correction of Faults.
- Helicopter handling and flying accuracy.
- Instructional technique.
- General airmanship/safety/positioning and use of airspace.

2.4.6 ***Accuracy***

It is anticipated that for the applicant to be able to produce convincing demonstrations, the handling skills and flying accuracy should be of an above average standard. Therefore, as a minimum, the CPL Skill Test tolerances for height, speed and heading as detailed in Part FCL shall apply.

2.4.7 ***Use of Notes***

Whilst it is expected that the applicant should have a sound understanding of the content of the flight exercise, occasional and judicious reference to notes throughout the AoC is permissible. However, it should be noted that this should not be to the detriment of the smooth flow or safety of the exercise.

2.4.8 ***Debrief***

After the flight the applicant must carry out a debrief of the 'student,' using where appropriate CRM facilitation techniques. The examiner will not rush the applicant through this section. The applicants debrief of the student will often answer some of the questions that the examiner may have intended to ask and confirm the applicant's ability to detect student faults. The debrief of the student should be based on logged notes and the applicant should have kept a note of all activities. After the applicant's debrief of the flight, the examiner may wish to discuss various or

methods of helicopter operation in order to clarify the applicant's actions. Reference may be made to the helicopter flight manual and the Training Organisation's Operations Manual or Flying Order Book. Where possible the applicant should be asked to complete a student training record for the flight in order that the examiner can assess this element.

2.5 Lecture

2.5.1 The applicant is required to give a lecture under test condition to other 'students', one of whom will be the examiner. The test lecture is to be selected from the items of Section 1. The amount of time for the preparation of the test lecture is agreed upon beforehand with the examiner (normally not more than 5 days). Appropriate literature may be used by the applicant. The test lecture should not exceed 45 minutes.

2.6 Associated Ground Subjects Oral Examination (FI and IRI only)

2.6.1 In the Theoretical Knowledge section the examiner will assess the applicant's ability to teach the student a selection of subjects from the following headings:

(a) Air Law.
(b) Aircraft General Knowledge.
(c) Flight Performance and Planning.
(d) Human performance.
(e) Meteorology.
(f) Navigation.
(g) Operational Procedures.
(h) Principles of Flight.
(i) Training Administration.

(Note: If the subject is previous assessed as acceptable in the test lecture it need not be repeated during this Section)

2.6.2 Examiners should use the opportunity to emphasise standardisation material that has been notified through examiner and Instructor Seminars or meetings. In particular, topics relating to Flight Safety training must always be included.

2.6.3 The ground oral examination should include questions concerning instruction and operation of the helicopter at night as well as the technique for basic instrument flying (where the FI holds the appropriate certificates). Advanced instrument flying techniques and radio aid navigation, including precision/non-precision instrument approaches, must be included if the instructor is an IRI or has the 'no applied IF' restriction removed from their FI certificate.

2.6.4 It is expected that the applicant should have a thorough knowledge of those aviation subjects associated with instruction of the relevant syllabus and the ability to present those subjects in an appropriate manner. However, it is accepted that this can be very broad based and therefore a list of core subjects is reproduced in this document PPL Syllabus (Annex 1), and the IR Syllabus (Annex 2). It must be stressed that this list is not exhaustive and nor will it limit the scope for the examiner's questions.

2.6.5 The examiner will select a range of relevant and pertinent questions from the required subjects. These could be, for example, be related to the flight exercise/briefing taught or met conditions of the day. Questions may be set in terms of a student or may be more searching to establish the applicant's depth of knowledge. Examiners will avoid obscure topics, questions that require a simple YES or NO answer or asking the same 'old favourite' questions. All questions and answers should be noted for debriefing and entered onto the examiner's report form.

2.6.6 Before starting the ground assessment, the applicant should be reminded that some questions may require in-depth answers but that there will be no trick questions. If the applicant does not understand or know the answer, then they should either seek clarification or say so.

2.7 Assessment of Associated Ground Subjects

It must be stressed that whilst the applicant's level of knowledge will be assessed, the emphasis

of the section will be on the ability of the applicants to impart that information to the student. To achieve this, the following items in addition to the competences listed at para 2.1.2 will be assessed by the examiner:

(a) Overall presentation, layout, use of colour/ visual aids/ diagrams, board plan, neatness/clarity of writing.
(b) Instructional technique, manner, stance, eye contact, student involvement, clarity of speech, explanations, and questioning technique.
(c) Technical content; sequence of exercise, breakdown of lesson/lesson plan, omissions.
(d) The ability to identify the correct subject matter, assess the knowledge level of the student and pitch the instruction at the required level to achieve an appropriate level of understanding.

2.8 Teaching Aids

2.8.1 In order to teach the desired subject to the student, the applicant may use whatever teaching aids are to hand e.g. view-foils, posters, photographs models etc, unless the examiner states that they wish to see the applicant's 'board work'. To answer questions on Air Law and Training Administration the applicant should demonstrate the ability to locate the required information from the appropriate documentation.

2.8.2 Whilst the applicant may occasionally and judiciously refer to notes or 'board plans' this should not be to the detriment of the flow of the instruction. If the applicant is experiencing difficulties with a particular subject, the examiner may deem it appropriate to have a 'coffee break' to permit the applicant to consult reference material before continuing.

2.9 Reference Documents

The following documents and equipment should be available to the applicant:

(a) United Kingdom AIP.
(b) AIC - Aeronautical information Circulars.
(c) CAP 393 - Air Navigation: The Order and Regulations.
(d) UK Part FCL –The Aircrew Regulation.
(e) CAP 804.
(f) Aeronautical Charts.
(g) PPL Training Syllabus.
(h) Aircraft Flight Manual.
(i) Operations Manual, Flying Order Book or Training Manual.

2.10 Instructor Assessment and Debriefing

2.10.1 The examiner shall consider all aspects of the assessment and the overall performance as well as individual items and sections. The assessment should be addressed under 3 main headings:

Section 1	Lecture/Ground Associated Subjects
Section 2	The Pre-Flight Briefing.
Section 3	The Airborne Exercises and Debrief.

2.10.2 A pass will be achieved when all Sections of the assessment are assessed as satisfactory.

2.10.3 A failure of one Section only of **Sections 1, 2 or 3** will result in a Partial Pass. The re-assessment requirement must be specified as follows:

Section 1 Fail = Re-assessment Section 1.
Section 2 Fail = Re-assessment Section 2 - however if the pre-flight brief was not sufficiently detailed to commence the flight then the flight should not take place and a new flight exercise with brief should be nominated to retest both sections 1 and 3
Section 3 Fail = Re-assessment Section 2 and any failed exercises in Sections 3, 4 and

Section 5.

2.10.4 Failure of more than one Section will require a complete re-assessment as attempt one in a new series.

2.10.5 Every attempt at the assessment must be recorded on a separate form.

2.10.6 Following any partial pass, the same examiner shall complete the re-assessment. Where this is not possible, the case should be referred to the ATO Head of Training or a CAA FOTI who will select the new examiner.

2.10.7 Retraining may be recommended after failing a first attempt but is mandatory after failing a series. Second series fails should be referred to a CAA FOTI.

2.10.8 The examiner may stop the assessment at any stage if they consider that the applicant's demonstration of skill and/or knowledge requires a complete reassessment.

2.11 Examiner Debriefing

2.11.1 Normally the applicant should be debriefed when all sections of the assessment have been completed, including Section 5. However, the examiner may terminate the assessment at any stage if it is considered that the applicant's demonstration of flying or instructional skills requires a complete re-assessment.

2.11.2 The preferred method for conducting the debriefing is for the examiner to state the overall assessment result at the beginning of the debrief. If the assessment results in a 'Partial Pass' or 'Fail', the examiner will explain which Sections were unsuccessful, the reasons for failure and any remedial action required, before moving on to any more general debrief topics.

2.11.3 The assessment of the flight assessment will be clearly stated and based upon the following items in addition to the competences listed in 2.1.2:

(a) Technical accuracy.
(b) Teaching methods.
(c) Ability to impart knowledge with brevity and clarity.
(d) Depth of knowledge of ground subjects and air sequences.
(e) Helicopter handling and airmanship.

2.11.4 The applicant should be encouraged to discuss the reasons for any failure.

2.11.5 Examiners will ensure that no misunderstandings remain at the end of the debriefing and applicants should be given advice and guidance as necessary.

2.12 Post Assessment Administration

2.12.1 The examiner shall complete 3 or 4 copies of the Examiner Report Form 1177, (1 for the applicant, 1 for the examiner, 1 to be sent to the CAA within 14 days and 1 for the applicant's national authority if different to the examiners). In addition, they will sign the SRG 1131/1133/1135 where appropriate. Copies of documents are retained by the examiner for 5 years.

2.12.2 An Examiner may issue a Temporary Certificate (SRG1100) when satisfied that the applicant has met all the training and testing requirements for the Instructor Certificate being applied for. The issuance of a Temporary Certificate is not compulsory; accordingly, an Examiner is not obliged to issue a Temporary Certificate when being unable to satisfy themselves that the applicant is fully compliant with the Part-FCL training and testing requirements. The applicant may exercise the privileges endorsed within the Temporary Certificate for the maximum period stated on the certificate which cannot be extended (commencing from the date of test). The Temporary Certificate is valid for UK CAA Part-FCL licence holders only.

2.12.3 Following any unsuccessful assessment, the applicant must be informed that the privileges of the certificate may not be exercised, even if there is an unexpired period of that certificate.

2.12.4 Should the examiner consider that the applicant's performance casts doubt upon their ability to exercise the privileges of any other certificate or authorisation, they may refer directly to a CAA Inspector.

2.12.5 The examiner should countersign the flight entry in the Instructor's flight logbook, entering their name, licence number and **result of the flight assessment.**

2.13 Revalidation and Renewal

2.13.1 **Revalidation:** If the assessment is successful and the instructor is within the 12 months period preceding the expiry date of the instructor certificate and has completed either;

(a) Attendance at an approved appropriate Instructor Seminar within the validity period of the certificate or,

(b) The required instructional experience as prescribed in Part-FCL subpart J.

The examiner should enter details in the applicant's licence, revalidating the certificate for a further 3 years from the date of expiry to end of the calendar month.

2.13.2 Instructors must include an assessment flight in their certificate revalidation process for at least every other revalidation

2.13.3 **Renewal:** Attendance at an Instructor Seminar and an AoC is required for the FI/IRI renewal. For TRI/SFI renewal see Part 3 and 4 of this document. The validity of the certificate is for 3 years (to the end of the calendar month) from the date of flight assessment, provided that the Seminar has been attended within the validity period. If the seminar is not yet completed the licence entry will be completed by the seminar provider.

2.13.4 When an Instructor completes the revalidation/renewal requirements by a seminar, approved for both helicopters and aeroplanes, either a FIE (A) or FIE (H) may complete the administrative actions by signing the applicant's Certificate of Experience on the Instructor Form and the FI certificate in the licence.

2.13.5 If the applicant has not completed the revalidation/renewal requirements no licence entry should be made. Applicants must be advised of the date by which the remaining requirements must be met in order to extend the period of validity of the certificate and must be given an Instructor Form with the successful progress check recorded on it.

PART 3 CONDUCT OF THE TRI ASSESSMENT OF COMPETENCE

3.1 Requirements

Applicants for the issue of a TRI certificate, wishing to add TRI instructional privileges to their FI Certificate or wishing to extend their privileges to another type, shall meet the pre-requisite requirements, and complete the relevant course and outlined in Part FCL.930.TRI TRI – Training course prior to conducting the assessment.

3.2 Content and Conduct of the Assessment

3.2.1 The assessment of competence for a TRI (H) shall be conducted in any of the following:

(1) an available and accessible FFS;
(2) if no FFS is available or accessible, in a combination of FSTD(s) and an aircraft;
(3) if no FSTD is available or accessible, in an aircraft.

3.2.2 The TRI AoC follows the format and criteria as described in Part 2 of this document except that the Theoretical Knowledge Oral element of Section 1 of the assessment is not normally required.

3.2.3 ***Section 1 - Test Lecture***
The applicant is required to give a lecture under test condition to other 'students', one of whom will be the examiner. The test lecture is to be selected from the ground theoretical knowledge syllabus of the type rating course. The amount of time for the preparation of the test lecture is agreed upon beforehand with the examiner (normally not more than 5 days). Appropriate literature may be used by the applicant. The test lecture should not exceed 45 minutes.

3.2.4 ***Section 2 - Flight Briefing***
The flight exercise for which the briefing is given is nominated by the examiner on the day of the test and should be relevant to the type rating syllabus for that aircraft type.

3.2.5 ***Section 3 - Main Flight Exercise***
This should be a flight from the type rating syllabus as briefed above. After completion of the main teaching exercise, the applicant will then be directed to cover a selection of other predetermined and notified flight exercises pertinent to the aircraft type including any mandatory exercises.

3.2.6 ***Section 4 - Multi-Engine Exercises***
For MEH particular attention should be paid to the applicant's ability to manage safely engine malfunctions and OEI operations.

3.2.7 ***Section 5 - Post Flight De-briefing***
In the debrief to the 'student' the applicant will be assessed on their use of CRM facilitation techniques. Ideally a type rating student should be able to identify what they did wrong, why they did it and what they should do to rectify it.

3.3 Administration

3.3.1 The examiner will complete the test details on the applicant's relevant instructor application and examiner report forms and forward these to the CAA as soon as possible. If applicable the applicant may be issued an SRG Form 1100.

3.3.2 Following any unsuccessful AoC for an instructor certificate, the applicant will be informed that the privileges of the certificate may not be exercised, notwithstanding that there may be an unexpired period of that certificate. Should it be considered that the applicant's performance casts doubt upon their ability to exercise the privileges of any other certificate or authorisation, then they may be referred directly to a CAA Inspector.

3.3.4 The examiner may countersign the flight entry in the applicant's flight logbook, entering their name, licence number and **result of the flight assessment.**

3.4 TRI Restricted Privileges

3.4.1 If the TRI training is carried out in FSTDs only, the privileges of TRIs shall be restricted to training in FSTDs. The restriction to FSTD shall be removed if a TRI has completed training in the aircraft and an assessment of competence has been conducted in the aircraft.

3.4.2 The privileges of a TRI are restricted to the type of helicopter in which the AoC for the issue of the TRI certificate was taken. Unless otherwise determined in the OSD, the privileges of the TRI shall be extended to further types if a TRI has completed the training specified in Part FCL.910 and passed an AoC on the further type.

3.4.3 The privileges of a TRI shall be extended to further variants in accordance with the OSD if the TRI has competed the relevant parts of the technical training and flight instruction parts of the applicable TRI course.

3.4.4 Before the privileges of a TRI(H) are extended from single-pilot to multi-pilot privileges on the same type of helicopters, the holder shall have completed at least 100 hours of multi-pilot operations on this type.

3.4.5 Notwithstanding the points above, holders of a TRI certificate who received a type rating in accordance with point FCL.725(e) shall be entitled to have their TRI privileges extended to that new type of aircraft.'

3.5 TRI Revalidation and Renewal

3.5.1 **Revalidation:** applicants shall, within the validity period of the TRI certificate fulfil at least two out of the three following requirements:

(i) completed at least 50 hours of flight instruction **in each of the types of aircraft** for which instructional privileges are held or in an FSTD representing those types, of which at least 15 hours shall be completed in the period of 12 months immediately preceding the expiry date of the TRI certificate. In the case of a TRI(H), the time flown as Flight Instructors (FIs), Instrument Rating Instructors (IRIs), Synthetic Training Instructors (STIs) or as any kind of examiners shall be accounted for this purpose,

(ii) complete instructor refresher training as a TRI(H) at an ATO,

(iii) in the period of 12 months immediately preceding the expiry date of the certificate, passed an assessment of competence in accordance with points FCL.935, FCL.910.TRI(b)(3) or FCL.910.TRI(c)(3), as applicable.

3.5.2 For at least each alternate revalidation of a TRI certificate, holders shall pass the assessment of competence in accordance with point FCL.935.

3.5.3 If TRIs hold a certificate for more than one type of aircraft within the same category, the assessment of competence taken on one of those types of aircraft shall revalidate the TRI certificate for the other types held within the same category of aircraft, unless it is otherwise determined in the OSD.

3.5.4 Specific requirements for the revalidation of a TRI(H) certificate TRIs(H) holding an FI(H) certificate in the relevant type shall be deemed to comply with the requirements in point (a). In that case, the TRI(H) certificate shall be valid until the expiry date of the FI(H) certificate.

3.5.5 **Renewal:** applicants shall, within the 12 months immediately preceding the date of the application, have passed the assessment of competence in accordance with point FCL.935 and shall have completed the following:

(i) at least 10 hours of flight time, including take-offs and landings on the applicable aircraft type, of which maximum 5 hours may be completed in an FFS or FTD 2/3.

(ii) instructor refresher training as a TRI at an ATO, which shall cover the relevant elements of the TRI training course.

3.6 Conducting the Revalidation/Renewal AoC in an FSTD

3.6.1 If the TRI holds both FSTD and aircraft privileges, the AoC conducted in an FSTD should cover both disciplines. The AoC air exercise content (main exercise, secondary exercises, and multi-engine exercises) should be divided between the disciplines at the discretion of the examiner. For aircraft privileges, the TRI and examiner should occupy the pilots' seats, treating the FSTD as an aircraft. The examiner, or another IOS operator may set up and control the FSTD. For FSTD privileges, the TRI may either occupy the pilot seat and control the FSTD via a remote tablet, if available, or occupy the IOS seat.

3.6.2 If the TRI holds FSTD privileges only, the AoC conducted in an FSTD should mainly cover instruction from the IOS seat. However, the TRI should also demonstrate the ability to conduct in seat instruction from a pilot seat to demonstrate and patter exercises as required.

3.6.3 If the TRI holds aircraft privileges only, the AoC conducted in an FSTD should cover instruction from the pilot seat, treating the FSTD as an aircraft. The examiner should also occupy a pilot seat. The examiner, or another IOS operator may set up and control the FSTD.

PART 4 CONDUCT OF THE SFI ASSESSMENT OF COMPETENCE

4.1 SFI Initial Assessment of Competence

4.1.1 It is a CAA requirement that the initial assessment of a SFI(H) should consist of an AoC in accordance Part 3.

4.2 Restricted Privileges

4.2.2 The privileges of SFIs shall be restricted to the FTD 2/3 or FFS of the aircraft type in which the SFI training course was taken.

4.2.2 The privileges may be extended to other FSTDs representing further types of the same category of aircraft if the holders have:

(i) completed the simulator content of the relevant type rating course,

(ii) completed the relevant parts of the technical training and the FSTD content of the flight instruction syllabus of the applicable TRI course,

(iii) conducted on a complete type rating course at least 3 hours of flight instruction related to the duties of an SFI on the applicable type under the supervision and to the satisfaction of a TRE or an SFE qualified for this purpose.

4.2.3 The privileges of the SFI shall be extended to further variants in accordance with the OSD if the SFI has completed the type relevant parts of the technical training and the FSTD content of the flight instruction syllabus of the applicable TRI course.

4.3 Revalidation and Renewal

4.3.1 **Revalidation:** applicants shall fulfil, before the expiry date of the SFI certificate, at least two out of the following three requirements:

(i) have completed at least 50 hours as instructors or examiners in FSTDs, of which at least 15 hours in the period of 12 months immediately preceding the expiry date of the SFI certificate,

(ii) have completed instructor refresher training as an SFI at an ATO,

(iii) have passed the relevant sections of the assessment of competence in accordance with point FCL.935.

4.3.2 Additionally, applicants shall have completed, on an FFS, the proficiency checks for the issue of the specific aircraft type ratings representing the types for which privileges are held.

4.3.3 For at least each alternate revalidation of an SFI certificate, holders shall comply with the requirement in para 2.2.1 (iii). 4.3.1 (iii)?

4.3.4 If an SFI holds a certificate in more than one type of aircraft within the same category, the assessment of competence taken on one of those types shall revalidate the SFI certificate for the other types held within the same category of aircraft, unless otherwise is determined in the OSD.

4.3.5 **Renewal:** applicants shall, within the period of 12 months immediately preceding the application for the renewal, comply with all of the following conditions:

(i) have completed instructor refresher training as an SFI at an ATO,

(ii) have passed the assessment of competence in accordance with point FCL.935,

(iii) have completed, on an FSTD, the skill test for the issue of the specific aircraft type ratings representing the types for which privileges are to be renewed.

4.4 Conducting the AoC in an FSTD

4.4.1 The SFI AoC conducted in an FSTD should mainly cover instruction from the IOS seat. However, the SFI should also demonstrate the ability to conduct in seat instruction from a pilot seat to demonstrate and patter exercises as required.

PART 5 CONDUCT OF IRI ASSESSMENT OF COMPETENCE

5.1 Requirements for Initial Issue of the IRI Certificate

5.1.1 Applicants for the issue of a IRI certificate shall meet the pre-requites requirements and complete the relevant course and outlined in Subpart J of Part FCL, including extending the privileges to another type of helicopter, prior to conducting an assessment.

5.2 Content and Conduct of the IRI Assessment of Competence

The IRI Assessment follows the format and criteria as described in Part 2 of this document.

5.2.1 ***Section 1 - Section 1 - Test Lecture***
The applicant is required to give a lecture under test condition to other 'students', one of whom will be the examiner. The test lecture is to be selected from the items of Section 1. The amount of time for the preparation of the test lecture is agreed upon beforehand with the examiner (normally not more than 5 days). Appropriate literature may be used by the applicant. The test lecture should not exceed 45 minutes.

5.2.2 ***Section 1 - Theoretical Knowledge***
The subject headings at Appendix 2 will be used to focus the questions towards the aircraft and its operation for IF. The applicant must demonstrate a thorough depth of knowledge on the privileges of the IRI certificate using references to the ANO, Part FCL Subpart J and Part AMC FCL 930.

5.2.3 ***Section 2 - Flight Briefing***
The flight exercise for which the briefing is given is nominated by the examiner on the day of the test and should be relevant to the IR syllabus.

5.2.4 ***Section 3 - Main Flight Exercise***
This should be the flight exercise from the IR syllabus as briefed above. After completion of the main teaching exercise, the examiner will then direct the applicant to fly a selection of other predetermined and notified flight exercises pertinent to the aircraft type including any mandatory exercises.

5.2.5 ***Section 4 – Multi Engine Exercises***
During these exercises, particular attention should be paid to the applicant's ability to manage safely engine malfunctions and OEI operations.

5.2.6 ***Section 5 - Post Flight De-Briefing***
The examiner will encourage the applicant to use CRM facilitation techniques and allow the applicant (as an 'experienced' pilot) to debrief themselves wherever possible. Ideally an applicant should be able to identify what they did wrong, why they did it and what they should do to rectify it!

5.3 Administration

5.3.1 The examiner shall complete 3/4 copies of the Examiner Report Form SRG 1177, 1 for the applicant, 1 for the examiner, 1 to be sent to SSC within 14 days and 1 for the Examiner's Competent Authority (if different).

5.3.2 Following any unsuccessful AoC for the revalidation of a certificate, the applicant must be informed that the privileges of the certificate may not be exercised, notwithstanding that there may be an unexpired period of that certificate.

5.3.3 Should the examiner consider that the applicant's performance casts doubt upon their ability to exercise the privileges of any other certificate or authorisation, they may refer directly to a CAA FOTI.

5.3.4 The examiner may countersign the flight entry in the Instructor's flight logbook, entering their

name, licence number and **result of the flight assessment.**

5.4 Revalidation and Renewal

5.4.1 **Revalidation:** If the assessment is successful and the instructor is within the 12 months period preceding the expiry date of the instructor certificate and has completed either;

(a) Attendance at an approved appropriate Instructor Seminar within the validity period of the certificate or,

(b) The required instructional experience as prescribed in Part-FCL subpart J.

The examiner should enter details in the applicant's licence, revalidating the certificate for a further 3 years from the date of expiry to end of the calendar month.

5.4.2 Instructors must include an assessment flight in their certificate revalidation process for at least every other revalidation

5.4.3 **Renewal:** Attendance at an Instructor Seminar and an AoC is required for the IRI renewal.. The validity of the certificate is for 3 years (to the end of the calendar month) from the date of flight assessment, provided that the Seminar has been attended within the validity period. If the seminar is not yet completed the licence entry will be completed by the seminar provider.

5.4.4 When an Instructor completes the revalidation/renewal requirements by a seminar, approved for both helicopters and aeroplanes, either a FIE (A) or FIE (H) may complete the administrative actions by signing the applicant's Certificate of Experience on the Instructor Form and the FI certificate in the licence.

5.4.5 If the applicant has not completed the revalidation/renewal requirements no licence entry should be made. Applicants must be advised of the date by which the remaining requirements must be met in order to extend the period of validity of the certificate and must be given an Instructor Form with the successful progress check recorded on it.

ANNEX 1 - GLOSSARY OR ABBREVIATIONS AND TERMS

AMC	Acceptable Means of Compliance
AoC	Assessment of Competence
ATPL	Airline Transport Pilot Licence
CPL	Commercial Pilot Licence
CRM	Crew Resource Management
FCS	Flight Crew Standards
EASA	European Aviation Safety Agency
FE	Flight Examiner
FEH	Flight Examiners Handbook
FE CPL	Flight Examiner Commercial Pilot Licence
FE (LAPL)	Flight Examiner Light Aircraft Pilot Licence
FE (PPL)	Flight Examiner Private Pilot Licence
FIE	Flight Instructor Examiner
GM	Guidance Material
IFR	Instrument Flight Rules
IMC	Instrument Meteorological Conditions
IR	Instrument Rating
IRE	Instrument Rating Examiner
IRRE	Instrument Rating Revalidation Examiner
IRI	Instrument Rating Instructor
L&TS	Licensing & Training Standards
ME	Multi Engine
MEH	Multi Engine Helicopter
OPC	Operator Proficiency Check
Part-FCL	Part Flight Crew Licensing (otherwise known as the aircrew regulation)
Proficiency Check	Demonstration of skill for the revalidation or renewal of a licence or certificate, including such oral examinations as may be required.
Renewal	The administrative action taken after a certificate or certificate has lapsed for the purposes of renewing the privileges of the certificate or certificate for a further specified period.
Revalidation	The administrative action taken within the period of validity of a certificate or certificate which allows the holder to continue to exercise the privileges of a certificate or certificate for a further specified period.
RT	Radiotelephony
SE	Single Engine
SEP	Single Engine Piston
SET	Single Engine Turbine
Skill Test	Demonstration of skill for a licence or certificate issue, including such oral examination as may be required.
SPH	Single Pilot Helicopter
TEM	Threat and Error Management
TRE	Type Rating Examiner
TRI	Type Rating Instructor
VFR	Visual Flight Rules

APPENDIX 1 FI THEORETICAL KNOWLEDGE ASSESSMENT

1.1 These notes are intended to give examiners and applicants a detailed list of the subjects that may be requested in Section 1 (Theoretical Knowledge) of the assessment. It must be emphasised that the list is not exhaustive, nor will it limit the examiners ability to question the applicants on any subject matter that is relevant to the appropriate syllabus.

1.2 The subjects listed are considered to be fundamental to the PPL syllabus and it is anticipated that the applicants having met the CPL Knowledge pre-requisite requirement for the FI course, should already be familiar with the subject matter. However, the applicant will also be assessed on the ability to impart the knowledge of the subject to the student. Whilst assistance from notes, 'board plans', aids and other readily available reference materials is permissible to assist, this should not distract from the overall flow and continuity of the lesson.

1.3 Initial issue applicants will normally be expected to answer two questions from each element and it is anticipated that each answer may normally take 10-15 minutes. Renewal or revalidation applicants may be required to answer only one question from each element dependent on experience and answers given. Therefore, to ensure there is minimum time wasted on unnecessary explanations the applicant should, through 'question and answering' techniques, determine the level of 'student' subject knowledge and from that decide the depth of level of explanation and appropriate media required before they start to answer the question.

1.4 If a subject is previous assessed as acceptable in the test lecture it need not be repeated during this section).

1.5 The headings used below relate directly to those shown in Part FCL and the Examiners Record.

Section 1 - Theoretical Knowledge

a) Air Law

- Define ICAO with examples of Articles and Annexes of the Convention.
- Demonstrate the ability to locate and explain relevant regulations of CAP 393, particularly the ANO, including, licensing & certificate privileges, Rules of the Air and SERA.
- Demonstrate the ability to locate and explain relevant Aircrew Regulations.
- Explain the implications of the Railways and Transport Safety Act 2003 (Aviation, Alcohol and Drugs).

(b) Aircraft General Knowledge

- Explain the principle of operation and construction of the aircraft systems listed in AMC FCL 725 for the relevant aircraft type including - Airframe/Rotors, Powerplant, Avionics, Systems, and Instrumentation.
- Explain the reasons for the normal and emergency drills in the Flight Manual (FM) relating to the aircraft systems.
- Explain the principles of operation of piston, fixed and free turbine, engines including compressor surge and stall.
- Explain the operation of rotor head systems including teetering, articulated, semi rigid and rigid.
- Explain the operation of tail rotor systems including, teetering, articulated, NOTAR and state the symptoms, effects and avoidance of LTE.
- State the Safety Bulletins, Air Directives and Regulations pertaining to the aircraft type.
- Explain the basic principles involved in Carburettor Icing and Carburettor Heating systems.

(c) Flight Performance and Planning

- Explain and demonstrate how to calculate factors affecting Helicopter and Engine Performance including:
  - Calculating mass and balance for the aircraft.
  - How to interpolate the relevant performance graphs from the FM.
  - The use of the Height Velocity Diagram/Cat A profiles from the FM.

- The relation between Density and Pressure Altitude using the relevant charts and mathematical calculations.
- The requirement and demonstrate how to calculate for Max Continuous and Max Take Off Powers (if applicable).

- Explain and define the altimeter considerations including:
  - Transition Altitude/Transitional Level/Flight Level, QNH/ Regional Pressure Settings/QFE/Standard Altimeter settings and the selection of Minimum Safe En–Route Altitude/Safety Altitude.

(d) Human Performance

- Explain the principles and processes of Teaching and Learning set out in UK FCL AMC 2.340.
- Explain the Basic Physiology effects to Human Performance as prescribed in UK FCL AMC 2.125, including -Concepts, Effects of Partial Pressure, Vision, Hearing, Motion Sickness and Flying Health.
- Explain the Basic Psychology effects to Human Performance as prescribed in UK FCL AMC 2.125, including - Information Process, Central decision Channel, Stress and Judgement/Decision making.
- Define and explain the importance and application of non-technical skills e.g. Airmanship, Crew Resource Management (CRM) and Threat and Error Management (TEM).

(e) Meteorology

Define and explain the following:

- Composition/Structure of the Atmosphere:
  - Explain the effects of changes in temperature and pressure on altimeter settings.
  - Define QNH, QFE, RPS and Standard Altimeter setting.
  - Define dew point and state the significance to aircrew.

- Atmosphere in Motion - Horizontal Component:
  - State the forces causing horizontal motion of the atmosphere (wind).
  - Define terms veer and back.
  - Define geotropic and gradient winds.
  - State the effect of surface friction on wind.
  - State the difference between the surface wind over land and sea given the same pressure gradient.
  - Describe the normal diurnal variation of wind.
  - Explain the development of land/sea breezes, katabatic/anabatic, winds and funnel effect.

- Atmosphere in Motion – Vertical Component:
  - Explain Lapse rates using typical examples for the environmental, dry adiabatic and saturated rates.
  - Describe how the relationship between lapse rates determines vertical motion.
  - Explain and state the significance of stability and instability.
  - Explain and state the significance of mechanical/turbulence, convection, orographic lift and mass lift/subsidence.
  - Explain Fohne effect.
  - Explain mountain/lee/standing waves.

- Visibility:
  - Define prevailing visibility (as given in METARs), oblique visibility, and RVR.
  - List the main causes and favourable conditions for the formation of haze.
  - Define fog and explain how radiation, advection, smoke hill and frontal fogs are formed, dispersed, and likely diversions for aircraft.

- Clouds and Precipitation:
  - Describe the basic cloud types.
  - State the cloud types formed by the four lifting processes.
  - Describe the growth of cloud particles into precipitation.
  - List the basic cloud types that give precipitation.

- State the significant features of the cloud types related to aircraft operations.
- State the effects of the types of precipitation on aircraft operations.

- Icing: List the types of icing, stating temperature range, type of cloud, adhesiveness, transparency and weight, characteristics, including the symptoms, hazards and actions to be taken in the event of engine/airframe icing.

- Thunderstorms: State the requirements for formation, stages of development and hazards to aviators of thunderstorms.

- Air Masses, Fronts and Pressure Systems:
  - Define the term 'air mass' and state the source region, track and associated weather on arrival for the main air masses affecting the UK.
  - Define the term 'front' and draw a cross section of a warm and cold front indicating slope, 0-degree level, cloud structure, wind changes and precipitation.
  - Describe and identify on a met chart the signification features of the following weather systems - Anticyclone, Ridge, Col, Trough and Polar Low.

- Interpretation of Meteorological Information: Decode METAR, TAF and meteorological charts.

(f) Navigation

- Explain the use of aeronautical maps and charts in practical navigation.
- Demonstrate how to use a mechanical Navigational Computer e.g. CRP-1.
- Explain the Principles of Navigation including:
  - Define IAS/CAS/TAS.
  - Define True and magnetic tracks and headings.
  - Define effect of wind on TAS/GS, and explain the triangle of velocities including drift, wind correction and ETA's.
  - Explain the principles of Mental Dead Reckoning (MDR) including drift lines and the 1:60 rule.

- Explain the basic principles and practical use of Radio Navigation including: Ground DF and Radar, ADF, VOR/DME, GPS, SSR.

(g) Operational Procedures

- Locate, interpret, and demonstrate the use of flight planning data relating to aircraft operations in UK airspace including AIPs, AICs etc.
- Demonstrate the ability to locate and explain the following ICAO Annexes:
  - Annex 6, Part III , Operations of Helicopters.
  - Annex 12, Search and Rescue.
  - Annex 13, Aircraft Accident Investigation.
  - Annex 16, Environmental Protection - Noise Limitations.

- Demonstrate how to complete an ATS Flight Plan.

(h) Principles of Flight

With the aid of a Board Plan, including a Vector Diagram where appropriate, explain the following:

- Basic Rotor Aerodynamics and Definitions including shaft axis, plane/axis of rotation, tip path plane, Lift Formula, blade pitch, equalization of lift, induced airflow, relative airflow, rotor thrust and drag, flapping, coning, overpitching and overtorquing.
- Basic Vector Diagram depicting forces on the Rotor Blade.
- Ground Effect.
- Tail Rotor Drift and Roll.
- Recirculation.
- Translational Lift.
- Flap back.
- Inflow Roll.
- Dynamic/Static Rollover.

- Ground Resonance.
- Power Curve.
- Limits to High Speed Flight.
- Vertical Autorotation.
- Autorotation in Forward Flight.
- Vortex Ring.

(i) Training Administration

Demonstrate the ability to locate and explain information from the following sources:

- UK FCL Aircrew Regulation.
- Standards Document 19(H) Guidance for PPL Skill Test Applicants.
- Safety Directives, Safety Notices and Information Notices.
- CAP 804.
- AICs.
- Student Administration including PPL(H) Licence Application Form

APPENDIX 2 IRI THEORETICAL KNOWLEDGE ASSESSMENT

1.1 These notes are intended to give applicants and examiners detailed account of the subjects that may be required to be instructed in Section 1 (Theoretical Knowledge) of the IRI assessment. It must be emphasised that the list is not exhaustive, nor will it limit the examiners prerogative to question the applicant on any subject matter that is relevant to the appropriate syllabus.

1.2 The subjects listed are contained in AMC FCL 930 are considered to be fundamental to the IR syllabi. It is anticipated that the applicant having met the theoretical knowledge pre-requisite requirement for the IRI course, should already be familiar with the subject matter. However, the applicant will also be assessed on the ability to impart the knowledge of the subject to the student. Whilst assistance from notes, 'board plans', aids and other readily available reference materials is permissible to assist, this should not distract from the overall flow and continuity of the lesson.

1.3 Initial issue applicants will normally be expected to answer two questions from each section and it is anticipated that each answer may normally take 10-15 minutes. Renewal or revalidation applicants may be required to answer less dependent on their experience level. Therefore, to ensure there is minimum time wasted on unnecessary explanations, the applicant should, through 'question and answering' techniques, determine the level of 'student' subject knowledge and from that decide the depth of level of explanation and appropriate media required before they start to answer the question.

1.4 If the subject is previous assessed as acceptable in the test lecture it need not be repeated during this Section)

1.5 The headings used relate directly to those shown in UK FCL and the Examiners Record.

Section 1 - Theoretical Knowledge

(a) Air Law

- Define ICAO with examples of Articles and Annexes of the Convention in relation to VFR/IFR.
- Explain the privileges of the Instrument Rating both inside and outside of controlled airspace.
- Demonstrate the ability to locate and explain the relevant procedures in PANS-OPS.
- Demonstrate the ability to locate and explain relevant regulations of CAP 393, particularly the ANO, including licensing/certificate privileges, Rules of the Air, the aircraft equipment required for IFR and SERA.
- Demonstrate the ability to locate and explain relevant UK Aircrew Regulations.
- Explain the implications of the Railways and Transport Safety Act 2003 (Aviation, Alcohol and Drugs).

(b) Aircraft General Knowledge

- Explain the principle of operation and construction of the aircraft systems listed in UK AMC FCL 725 for the relevant aircraft type including - Airframe/Rotor, Avionics and Power plant Systems and Instrumentation.
- Explain the principle of operation, use, and serviceability checks of the aircraft navigation systems.
- Explain the principles of operations, the errors, pre flight, in flight serviceability checks and the system failures in relation to the following: Airspeed Indicator, Altimeter, Vertical Speed Indicator, Altitude Indicator, Heading Indicator, Turn and Slip Indicator, Magnetic Compass.

- Explain the reasons for, and describe, the normal and emergency drills in the Flight Manual (FM) relating to the Aircraft systems.

- State the Safety Bulletins, Air Directives and Regulations pertaining to the aircraft type.

- Explain the basic principles involved in Engine Icing and Engine Intake Heating systems (as applicable).

(c) Flight Performance and Planning

- Explain and demonstrate how to calculate factors affecting Helicopter and Engine Performance including: calculating mass and balance for the aircraft, how to interoperate the relevant performance graphs from the FM, the use of the Height Velocity Diagram/Cat A profiles from the FM, the relationship between Density and Pressure Altitude using the relevant charts and mathematical calculations, the requirement and demonstrate how to calculate for Max Continuous and Max Take Off Powers (if applicable).
- Transition Altitude/Transitional Level/Flight Level, QNH/Regional Pressure Settings/QFE/Standard Altimeter setting, selection of Minimum Safe En–Route Altitude/Safety Altitude, Altimeter setting procedures pre flight/ take off/en-route/approach and landing/missed approach.

(d) Human Performance

- Explain the principles and processes of Teaching and Learning set out in AMC FCL 930 FI (Phase 1 of the IRI Course).
- Explain the Basic Physiology/Psychology effects to Human Performance including: The Senses, Spatial Disorientation, Sensory Illusions, Stress.
- Define and explain the importance and application of non-technical skills e.g. Airmanship, Crew Resource Management (CRM) and Threat and Error Management (TEM).

(e) Meteorology

- Explain how to obtain meteorological information including: Met Services Available, Met Briefings, Actual Weather Reports TAFs/METARs/SIGMET/ATIS, En-route Forecasts.
- Explain the operational significance of meteorological conditions including: Icing, Turbulence, Visibility, Wind, Cloud and Precipitation, Air Masses, Fronts and Pressure Systems.

(f) Navigation

- Explain the basic principles, the ground/helicopter equipment and use of radio navigational aids including: VOR, NDB, VHF/ DF, DME, Primary/Secondary Radar, Marker Beacons, Transponders, GPS, En–Route Radar Services.
- Explain the use, preparation, planning and amendment of charts including: Aeronautical Maps, En Route Charts, Departure and Arrival Charts (SIDs and STARs), Instrument Approach CDFA, PINS Approaches and Landing Charts.
- Explain classification of airspace, airspace restrictions and hazards.
- Demonstrate compilation of flight plans.
- Explain how to prepare a PLOG.
- Explain use of radio/radar in Air Traffic Services, including types of service and radio failure.
  Demonstrate how to calculate and use: Transition Altitude/Level, Flight Levels, Minimum Safe En Route Altitude and Minimum Sector Altitude.

- Explain aerodrome holding and approach to land procedures including:
  - Minimum Sector Altitudes.
  - Determination of minimum Safe Decent Height/Altitudes.
  - Precision Approaches/Non Precision Approaches.
  - Radar Approach Procedure.
  - Missed Approach Procedure.
  - Visual Manoeuvring/Circling after an Instrument Approach.

(g) Operational Procedures

- Explain the basic radial scan technique and how to interpret the flight instruments information.
- Locate, interpret and demonstrate the use of flight planning data relating to IFR aircraft operations in UK Airspace including AIP, NOTAMS, AIC.
- Explain the form of holding patterns, sector joins and methods changing from hold to approach procedure (PANS- OPS).
- Explain the technique for ADF/RMI, VOR/HSI, and OBS tracking including wind effect.
- Explain the basic principles and use of aerodrome arrival and departure procedures including precision and non-precision approaches including the missed approach procedures.
- Explain how to carry out an ILS/NDB/VOR approach.
- Explain the use of instrument arrival plates.
- Demonstrate how to complete an IFR flight plan.

(h) Principles of Flight

- Where appropriate explain basic Rotor Aerodynamics and Definitions including: shaft axis, plane/axis of rotation, tip path plane, Lift Formula, blade pitch, equalization of lift, induced airflow, relative airflow, rotor thrust and drag, flapping, coning, overpitching and overtorquing.
- Where appropriate describe the operational significance of the: Power Curve, Limits to High Speed Flight, Autorotation in Forward Flight and Vortex Ring.

(i) Training Administration

- Demonstrate the ability to locate and explain information from the following sources:
  - UK Aircrew Regulations.
  - FCL Standards Documents 1(H), and 7(A/H).
  - Safety Directives, Safety Information Notices and Information Notices.
  - CAP 804.
  - AICs.
  - PANS-OPS (ICAO DOC 8168 Vol. I and II).

APPENDIX 3 ASSESSMENT CRITERIA

1. *REFERENCES*

1.1 Criteria for the assessment of instructor competence are provided in the following documents:

- PANS Training (Chapter 4 and the attachment).
- UK FCL (AMC 3 FCL 935).
- CAP 737 Crew Resource Management Training.

2. *CRITERIA*

2.1 These criteria comprise a unit of competence, an element or elements of observable performance and the associated demonstration of knowledge. Although there are slight variations between the various documents, generally the main competence units are as follows:

Competence	Performance	Knowledge
Prepare resources	(a) ensures adequate facilities; (b) prepares briefing material; (c) manages available tools.	(a) understand objectives; (b) available tools; (c) competency-based training methods.
Create a climate conductive to learning	(a) establishes credentials, role models appropriate behaviour; (b) clarifies roles; (c) states objectives; (d) ascertains and supports trainees needs.	(a) barriers to learning; (b) learning styles.
Present knowledge	(a) communicates clearly; (b) creates and sustains realism; (c) looks for training opportunities.	teaching methods.
Integrate TEM and CRM	makes TEM or CRM links with technical training.	HF, TEM and CRM.
Manage time to achieve training objectives	allocates time appropriate to achieving competency objective.	syllabus time allocation.
Facilitate learning	(a) encourages trainee participation; (b) shows motivating, patient, confident and assertive manner; (c) conducts one-to-one coaching; (d) encourages mutual support.	(a) facilitation; (b) how to give constructive feedback; (c) how to encourage trainees to ask questions and seek advice.
Assess trainee performance	(a) assesses and encourages trainee self-assessment of performance against competency standards; (b) makes assessment decision and provide clear feedback; (c) observes CRM behaviour.	(a) observation techniques; (b) methods for recording observations.
Monitor and Review progress	(a) compares individual	(a) learning styles;

	outcomes to defined objectives; (b) identifies individual differences in learning rates; (c) applies appropriate corrective action.	(b) strategies for training adaptation to meet individual needs.
Evaluate training sessions	(a) elicits feedback from trainees; (b) tracks training session processes against competence criteria; (c) keeps appropriate records.	(a) competency unit and associated elements; (b) performance criteria.
Report outcome	reports accurately using only observed actions and events.	(a) phase training objectives; (b) individual versus systemic weaknesses.

2.2 Currently, it is a requirement of PANS Training and UK FCL that all instructors delivering competence-based training (i.e. training for the Multi-crew Pilot Licence) are assessed against the above criteria. Additionally, those seeking accreditation as CRM instructors are assessed against similar criteria. The intent of UK Part FCL is that all instructors shall be assessed for competence against such criteria.

2.3 The assessment criteria presented in this appendix are compatible with and expand upon the general competence units listed above by providing a list of representative behavioural markers. For convenience, the order in which the behavioural markers are presented reflects more the order of events of a typical instructor assessment or check rather than the order in which the competence units are listed in the source documents. They are presented as word pictures that describe acceptable performance and are provided to facilitate the objective, reliable and transparent assessment of instructor competence by examiners. The aim is to ensure that all instructors, and those who train instructors, have access to and understand the criteria against which their performance is assessed, enabling them to be appropriately trained and fully prepared.

3. *PRE-FLIGHT BRIEFING ASSESSMENT CRITERIA*

3.1 The purpose of the pre-flight briefing is to ensure that the student is prepared for the airborne instruction he/she is about to receive. This should not be the time to introduce new concepts to the student – all the theory underpinning the practical lesson should have been learnt previously from a long briefing and by directed self-study. The pre-flight briefing should take approximately 40 minutes and ideally be given shortly before the airborne lesson, so that it is fresh in the student's mind.

3.2 The instructor assessment /check schedule lists the following items for assessment:

- Visual presentation and content;
- Technical accuracy;
- Clarity of explanation;
- Clarity of speech;
- Instructional technique;
- Use of model and aids;
- Student participation.

3.3 Generally, examiners look at pre-flight briefing as a whole and assess it in three main areas: overall presentation, instructional technique and technical content. The following bullet points are indicators of sound instructor competence:

(a) Overall presentation:

- The brief is presented in a location conducive to learning, for example an enclosed briefing room or private area with low ambient noise level.
- The temperature and lighting are adjusted to make the environment comfortable.
- The instructor is fully prepared for the briefing and prepares the room and training aids before the arrival of the student.
- The instructor utilises training aids in an appropriate and effective manner to enhance the impact of verbal briefing.
- Where a whiteboard, flip sheet or OHP is used, the layout is logical and uncluttered, colour is used consistently and effectively (e.g. red to indicate importance or danger); handwriting and diagrams are neat and clear.
- Where an OHP or digital media is used, the instructor uses a "gradual reveal" technique to focus the student's attention on the part of the lesson being discussed.
- Where training aids such as model aircraft or sectioned instruments are used, the instructor indicates movement or operation in the correct sense and from the perspective of the student.

(b) Instructional technique:

- The instructor's manner and attitude encourages a relaxed but effective and professional learning environment.
- The instructor recognises the trainee's needs and ability and adapts his/her teaching style accordingly.
- The instructor displays enthusiasm, patience, honesty, flexibility, self-confidence and where appropriate, humour; overall giving the impression that they have a vested interest in the student pilot's progress.
- The instructor does not exhibit any distracting mannerisms or display any negative personality traits such as sarcasm, disinterest, impatience, an overbearing or demeaning manner.
- The instructor uses appropriate question technique to establish the student's existing level of knowledge and personal preparation.
- Explanations given are clear, concise, technically correct and illustrated with appropriate use of visual aids.
- Throughout the brief the instructor makes it quite clear who will be in control of the aeroplane by using phrases such as, "I will teach.....,You will practise...., " rather than the less specific, "We will have a look at...."
- The student is encouraged to participate fully in the brief and the instructor regularly checks understanding by posing appropriate and relevant questions.

(c) Technical content:

- The instructor is familiar with the briefed material and demonstrates adequate knowledge for the role.
- The brief includes a clearly defined, relevant and achievable aim.
- The instructor builds upon previous lessons and indicates, in a logical sequence, how the lesson will progress; which skills will be revised from previous lessons, which new skills will be learnt and how the aim will be achieved.
- It is assumed that the lesson is part of a structured syllabus, in which case the instructor briefs all items within the syllabus lesson plan without omission.
- Where the instructor refers to specifics, for example engine and airframe limitations, these are technically correct.
- In addition to briefing the main exercise, the instructor incorporates practical guidance and training in airmanship, resource management and threat and error management, and indicates to the student why this is relevant and how it will be achieved.

- The instructor is able to provide clear, concise and technically correct answers to student questions or concerns related to but not necessarily part of the briefed exercise.

4. *AIRBORNE EXERCISE ASSESSMENT CRITERIA*

4.1 For the airborne exercise instructors will be assessed on their personal flying ability, flight management skills and ability to present a coherent and effective instructional lesson.

4.2 The flight lesson begins with pre-flight preparation. All instructors must be able to determine, without error, that they, their students and the aircraft they are about to fly are suitable prepared for flight. Pre-flight preparation includes (but is not limited to) the following items:

- Personal preparation, for example by using the "I'M SAFE" (Illness, Medication, Stress, Alcohol, Fatigue, Eating) mnemonic.
- Aircraft performance planning. The instructor calculates the aircraft performance for the prevailing conditions and ascertains that the take off and landing distances available, after considering any additional factors, are sufficient for the flight to be conducted safely.
- Mass and Balance. The instructor calculates the aircraft mass and balance and confirms that it will remain within limits throughout the flight.
- Pilot Operating Handbook or Aircraft Flight Manual and Checklist. The instructor is thoroughly familiar with the POH/AFM & Checklist and is able to obtain information regarding the aircraft specifications, limitations, normal and abnormal operation, performance, loading, handling and systems without error.
- Fuel planning. The instructor completes a fuel plan and confirms that the fuel has been checked to ensure that the intended flight may be conducted safely and completed with sufficient reserve and contingency fuel.
- NOTAM and Weather Data. The instructor checks and correctly interprets NOTAM and weather information and ensures that the intended flight can be conducted safely and effectively with a high likelihood of achieving the aim.
- Use of AIP and AIC. The instructor has a working familiarity with the relevant parts of the AIP and associated AIC and is able to obtain information relevant to the airfields, airspace and aeronautical facilities likely to be used on the intended flight.

4.2 Although instructors must complete thorough pre-flight planning and preparation for all flights, for the sake of expediency examiners may select only one or two items to formally assess on an assessment or check. This may be conducted either as a teaching exercise or as a demonstration.

4.3 For the main airborne exercise, and any additional exercises, the assessment /check schedule lists the following items for assessment:

- Arrangement of demonstration;
- Synchronisation of speech/demo;
- Correction of faults;
- Aircraft handling;
- Instructional technique;
- General airmanship/Safety;
- Position and use of airspace.

4.4 As with the pre-flight brief, the examiner generally looks at the overall picture to assess whether the instructor gives an effective lesson and demonstrates satisfactory standards of aircraft handling and flight management. The following are reliable indicators of competence for an airborne instructional lesson:

- The instructor selects an appropriate operating area and altitude band in which to present the exercise. For example, for early training exercises an area with a distinct horizon and minimal turbulence and an altitude that ensures satisfactory aircraft performance.
- The instructor ensures that the student is comfortable and that communication is

unhindered (radio and intercom volume and squelch are correctly set). Where possible, a "quiet" frequency is selected so that the lesson is not interrupted with background radio chatter.

- The instructor uses clear, concise and unambiguous phrases with correct and appropriate aviation phraseology.
- Hand-over and take-over protocol is exemplary. There is never any doubt about who has control of the aircraft.
- The instructor refrains from making control inputs (riding the controls) when the student is flying. If corrective action is necessary the instructor takes control from the student.
- When skills involving control inputs are being taught, the student is invited to "follow through" whilst the instructor manipulates the controls. Upon completion of the demonstration the student is instructed to "relax".
- The instructor briefs the student on the exercise to be flown, hands over control, then monitors in silence as the student practises the manoeuvre. Upon completion, the instructor takes back control before debriefing/re-briefing. Note: This is in contrast to the instructor handing over control then giving the brief, or debriefing whilst the student is still in control of the aeroplane. The latter is poor instructional technique because the student must concentrate both on controlling the aircraft and listening to the instructor.
- Generally, it is poor practise to coach a student through a manoeuvre. Occasional words of encouragement are perfectly acceptable such as, "Good", "That's nice", "Well done" etc. However, the instructor should avoid providing further guidance, for example: "Add more power", "Raise the nose slightly", etc. An instructor who tends to do this should ask themselves the question, "How will my student perform when I'm not here?"
- When the instructor is flying he/she keeps the student mentally alert and engaged in the conduct of the flight, for example by asking for routine cruise checks.
- The instructor highlights where skills or procedures involve the practical application of previously acquired theoretical knowledge.
- The student is never put in a position where he/she is flying a manoeuvre or practising a skill that has not previously been taught.
- Once a manoeuvre or skill has been taught, the student is given every opportunity to practise that manoeuvre or skill, for example by configuring the aircraft for the next event.
- The instructor always adopts the same techniques as those taught to and expected of the student. For example, if students are taught and expected to perform a thorough lookout prior to commencing each manoeuvre (which they should be), then the instructor must set an exemplary example by doing likewise. It is all too easy to give the impression that there are two ways of flying, one when learning and another when qualified and experienced.
- All demonstrations are convincing and accurately flown with smooth, co-ordinated control inputs. When quoting speed, altitude, heading, power settings and other parameters the instructor ensures that they correspond with the actual aircraft performance and configuration.
- The instructor does not attempt to gloss over or bluster his/her way out of poor demonstrations. The instructor admits the error and repeats the demonstration, where appropriate making a teaching point out of it.
- Where appropriate, the instructor introduces "deliberate errors". For example, when first teaching how to regain level flight the instructor deliberately selects an attitude that is slightly too high or too low. He/she then indicates that the attitude selected is incorrect because the altimeter indicates a gradual climb/descent and shows how an adjustment is necessary to refine level flight.
- The instructor's "patter" is co-ordinated with the demonstration such that the aircraft can be seen to be responding in the manner described.
- The lesson is developed in the same sequence and with the same content as the pre-flight brief.
- The instructor is attuned to the student's ability and progress and adjusts the pace of the lesson accordingly.
- The instructor maintains a high level of situational awareness and uses the airspace efficiently such that the lesson is not prolonged unnecessarily with re-positioning.
- The instructor continues to prosecute an effective lookout throughout the lesson and avoids becoming engrossed in events within the aircraft.

- The instructor recognises and corrects significant student-handling errors in a sympathetic and efficient manner and at the earliest appropriate moment.
- The instructor is not overly fussy about minor student handling errors to the detriment to the flow and continuity of the airborne exercise.
- The instructor encourages critical self-analysis.
- The instructor provides appropriate positive comment and praise to reinforce correct technique, effective flight management and sound decision-making by the student.
- The instructor incorporates or highlights practical examples of "airmanship", threat avoidance, resource management, aeronautical decision-making and error management into the air exercise.

5. *POST FLIGHT DEBRIEFING ASSESSMENT CRITERIA*

5.1 The post-flight debriefing is an often overlooked but vital part of pilot training. It provides an opportunity for the student to consolidate his/her thoughts whilst the preceding lesson is still fresh in the mind and for the instructor to reinforce important teaching points and clear up any misunderstandings. Additionally, the instructor can focus attention and direct any self-study for the next lesson or part of the syllabus.

5.2 The following are indicators of competent debriefing skills:

- The instructor correctly identifies and states whether or not the student achieved the aim of the lesson.
- The instructor correctly identifies any critical handling errors and/or fundamental gaps in the student's knowledge, skills and understanding and specifies appropriate remedial training.
- The instructor correctly identifies any minor handling errors and/or any minor gaps in the student's knowledge, skills and understanding and corrects these by de-briefing and directed self study.
- The instructor correctly identifies and praises examples of student progress and achievement and developing competence, and skill.
- The instructor reinforces examples of sound decision-making and effective threat avoidance, resource and error management.
- Where appropriate, the instructor makes reference to a suitable behavioural marker system (e.g. NOTECH) to reinforce the debriefing of non-technical skills.
- The debrief focuses on significant aspects of the lesson, rather than simply following a chronological order of events.
- The instructor encourages student participation and uses facilitative techniques where appropriate to check comprehension and enhance the learning process.
- The instructor provides clear, concise and technically correct answers in response to direct student questions.
- The instructor provides directed self-study in anticipation of the next lesson or part of the syllabus.
- The instructor completes the student's training record with clear, concise notes and objective assessment.
- Inadequate student progress or critical errors and omissions are recorded and highlighted for attention and remedial action.

6. THEORECTICAL KNOWLEDGE (ORAL) ASSESSMENT CRITERIA

6.1 As for the pre-flight briefing, examiners generally look at the theoretical knowledge oral and long briefing as a whole and assess three main areas: overall presentation, instructional technique and technical content. Many of the indicators of instructor competence are the same as those listed for the pre-flight briefing and post-flight debriefing at paragraphs 5-7 and 13,14 above. The following additional criteria apply:

- The instructor is able to locate and indicate the content of the relevant theoretical

knowledge syllabus.

- The instructor retains a working knowledge and understanding of the majority of topics from the relevant theoretical knowledge syllabus and is able to discuss with confidence and answer questions related to the syllabus (theoretical knowledge oral).
- With sufficient time to prepare, the instructor demonstrates the ability to teach in depth and from basic principles any topic from within the appropriate theoretical knowledge syllabus (long briefing).
- Where the instructor makes a statement or provides information, either during a prepared brief or when answering questions, the information is technically correct.
- The instructor is able to indicate where relevant information may be found in source documents, reference material and training manuals.

APPENDIX 4 ASSESSMENT OF COMPETENCE – MANAGING STRESS

As you prepare for your test a certain amount of stress is helpful. Too much stress can be unhelpful, as it can affect your memory and concentration. Even the word test can induce panic and doubt. Here are some ways of managing and reducing your stress.

Make sure you eat regularly. Skipping a meal, e.g. breakfast, will make your blood sugar level unstable and this will make the symptoms of stress worse.

Do not be tempted to increase your intake of tea or coffee as caffeine will increase your stress level (a maximum of 5 cups of tea or coffee a day is recommended). Energy drinks may contain high levels of caffeine and will not help.

Exercise has been proved to reduce stress. It uses up the body chemicals produced by too much stress (e.g. adrenalin) and replaces them with endorphins, feel-good body chemicals. You can test this: next time you are going to take exercise note how stressed are you before you start, on a scale of 0 - 10 (where 0 = calm and 10 = stressed), then measure again when you return from the exercise. Therefore exercise on the day before the test and on the day of the test will help to reduce your stress levels. It will also distract you and help you to sleep well the night before. If you are feeling very stressed just before the test, take some vigorous exercise e.g. power walk round the car park before going in.

Stress is increased by negative thoughts e.g. 'I am going to fail this test'. Having the thought will not make any difference directly to the outcome of the test, but will increase your stress levels. Similarly don't load yourself with unreasonable assumptions of your required skills – no test demands a perfect performance.

If you find that despite your best endeavours your stress is higher than is helpful to you, try some distraction. Concentrate on the things around you, refocus your mind and distract yourself from your thoughts. Try listening to other people's conversations, count the number of red things in the room, guess what the people in the room may be going to eat that evening - anything that will engage your attention. The more detailed the task you give yourself, the more distracting it will be.

If you know that you are inclined to become stressed, then plan ahead how you might manage your stress. Decide what exercise you are going to take, and practise what form of distraction you are going to use. Make sure that you allow plenty of time on the day; do as much preparation in advance as is possible. Plan to arrive early and ensure that you have all the equipment that you may need. Don't add to the pressure; is it really sensible to book a flight home immediately after your test? If, say, family pressures are mounting consider a training break until things settle down. Do not be tempted to test just because money is tight – you must be ready.

During your test try to prioritise tasks; omitting or delaying a minor activity is preferable to rushing into a more important event. Listen carefully to ATC, both to your own clearances and instructions as well as to other calls that may affect you. Tell ATC what you want to do and avoid unwanted communication tasks when you are going to be busy.

The best defence against stress is the confidence that comes from sound preparation and regular practice. Various Standards Documents are available to you on the CAA web site which clearly set out what you are required to do. Your instructors are there to deliver the skills training necessary to meet the test standard.

Recurrent training and testing is going to be a feature of your aviation career. Coping with stress is just one more skill to learn on the way.