CIVIL AVIATION DIRECTORATE
Civil Aviation Directorate, Transport Malta, Pantar Road, Ħal Lija LJA 9023 Malta. Tel:+356 2555 5000 cadpel.tm@transport.gov.mt www.transport.gov.mt

Flight Examiner Manual and Policy for Aeroplane Examiners Authorised as FE, CRE, IRE, FIE

Version 5.0

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Amendment Summary

Paragraph	Change
0.8 1.6	**Revision 2** Limitation of privileges of examiners amendment as per Reg. 2019/1747 Revalidation and renewal of examiner certificate amendment as per Reg. 2019/1747
Abbreviations 1.4, 2.3	Revision 3 Amendments due to Regulation 2019/1974 UPRT
1.4	Revision 4 Amendment to privileges due to Regulation 2020/359
All	Revision 5 General editorial changes only

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Abbreviations

ACA	Asymmetric Committal Altitude
ACH	Asymmetric Committal Height
ADF	Automatic Direction Finding
AFM	Aircraft Flight Manual
AGL	Height Above Ground Level
AI	Attitude Indicator
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication
AMC	Acceptable Means of Compliance
ANO	Air Navigation Order
AoC	Assessment of Competence for Part-FCL
APU	Auxiliary Power Unit
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
ATO	Approved Training Organisation
CAS	Calibrated Airspeed
CDFA	Continuous Descent Final Approach
CDL	Configuration Deviation List
CFIT	Controlled Flight Into Terrain
CPL	Commercial Pilot Licence
CRE	Class Rating Examiner
CRI	Class Rating Instructor
DA or DH	Decision Altitude or Decision Height
DI	Direction Indicator
DME	Distance Measuring Equipment
EFATO	Engine Failure After Take-Off
EASA	European Aviation Safety Agency
ETA	Estimated Time of Arrival
EU	European Union
FI	Flight Instructor
FIE	Flight Instructor Examiner
FIR	Flight Information Region
FE	Flight Examiner
FL	Flight Level
FMS	Flight Management System
FORDEC	Facts-Options-Risks-Decision-Execution-Check
FSTD	Flight Simulation Training Device
GM	Guidance Material
GND	Ground
GPS	Global Positioning System
HSI	Horizontal Situation Indicator
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IR	Instrument Rating
IRE	Instrument Rating Examiner
IRI	Instrument Rating Instructor
LAPL	Light Aircraft Pilot Licence
LOC	Instrument Landing System Localizer
LDG	Landing
LLZ	Localizer
LPC	Licence Proficiency Checks
LPV	Localizer Performance with Vertical Guidance
LST	Licence Skill Test (Part-FCL skill test of initial issue)
MAP	Missed Approach Point
MCC	Multi-Crew Coordination

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MDA	Minimum Descent Altitude
ME	Multi-Engine
MEL	Minimum Equipment List
MEP	Multi-Engine Piston
MFD	Multi-Function Display
MSA	Minimum Safety Altitude
NDB	Non-Directional Beacon
NOTAM	Notice to Airmen
OAT	Outside Air Temperature
OM	Operations Manual
PBN	Performance Based Navigation
PEL	Personnel Licensing
PF	Pilot Flying
PFD	Primary Flight Display
PPL	Private Pilot Licence
QRH	Quick Reference Handbook
RMI	Radio Magnetic Indicator
RT	Radio Telephony
SE	Single Engine
SEN	Senior Examiner
SEP	Single Engine Piston
SFE	Synthetic Flight Examiner
SID	Standard Instrument Departure
SIGMET	Significant Meteorological Information
SOP	Standard Operating Procedures
SPA	Single Pilot Aeroplane
ST	Skill Test
STAR	Standard Terminal Arrival Route
TEM	Threat and Error Management
TM-CAD	Transport Malta Civil Aviation Directorate
T/O	Take Off
TRI	Type Rating Instructor
UAS	Undesired Aircraft State
UPRT	Upset Prevention and Recovery Training
VFR	Visual Flight Rules
VMC	Visual Meteorological Conditions
VOR	Very High Frequency (VHF) Omni-Directional Range
VYSE	Velocity Y, Single-Engine
WX	Weather

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Definitions

Applicant	Pilot requiring a rating or certificate
Candidate	Pilot undergoing a test, check or assessment of competence
Competency	Human Performance indicator and observable behavior
Demonstration of theoretical knowledge	The examiner applicant shall demonstrate to the inspector a satisfactory level of knowledge concerning regulatory requirements associated with the function of an examiner.
Duties of crew during acceptance tests	It is important that all pre-flight briefings are thorough and that all members of the flight are aware of their duties and responsibilities throughout the acceptance test.
Dummy	Pilot acting as an applicant not requiring a rating. The primary duty of a 'dummy' is to act as an applicant in all aspects of the flight. During the flight it is important that he makes some errors (whether by accident or by design is not important), so that the candidate must observe, exercise judgement, assess and have something to debrief on. The 'dummy' is to include some obvious mistakes to be detected by the candidate. In general, he must try to simulate a typical flight of a marginal applicant. The purpose of the flight is to ensure that the candidate is aware of his duties as an examiner. A 'Pass' with no errors would prove very little. Therefore the 'dummy' needs to be an experienced pilot.
Part FCL	Regulation Aircrew Annex I
Part OPS	Regulation for Operators Annex III
Part MED	Regulation for Medicals Annex IV
Performance Criteria	Statements used to define required levels of performance
Proficient	Demonstration of necessary skills, knowledge and attitudes
Proficiency Check	a demonstration of skill to revalidate or renew ratings (e.g. LPC)
Revalidation	the administrative action taken within the period of validity of a rating or certificate which allows the holder to continue to exercise the privileges of a rating or certificate for a further specified period consequent upon the fulfilment of specified requirements
Renewal	the administrative action taken after a rating or certificate has lapsed for the purpose of renewing the privileges of a rating or certificate for a further period consequent upon the fulfilment of specified requirements
Skill Test	A demonstration of skill for licence or rating issue (e.g. LST)

Chapter 0 - Introduction

0.1 Generic Note

The specific routes stated in this document are relevant for tests being conducted in Malta.

0.2 Purpose

This document has been established to satisfy requirements to ensure the conduct and performance of TM-CAD certified examiners in accordance with ARA.FCL.205.

0.3 Scope

This Manual is applicable for all Malta authorised FE, CRE, IRE and FIE examiners.

TM-CAD is required to maintain a database of examiners' names and personal e-mail addresses. If you change your e-mail address, please ensure that you use the email address below to inform us of any changes. Simply enter your Examiner reference number in the message field, and then send to cadpel.tm@transport.gov.mt.

0.4 Flight Examiner's Manual

This manual is published as an appendix to Commission Regulation (EU) No. 1178/2011 (as amended). Regulation (EU) No. 1178/2011, the EASA Aircrew Regulation came into force on 8 April 2012 and is defined as Part FCL. The requirements in the regulation shall always be adhered to.

The intention and purpose of this document is to offer guidance on how to adhere to this Regulation and national statutory laws. Nothing in this document is intended to conflict with the EASA Aircrew Regulation or Malta statute law where applicable. Whilst every effort is made to ensure that all information is correct at the time of publication, TM-CAD reserves the right to amend this document as required to accommodate changes to the primary authority documents, to correct errors and omissions or to reflect changes in national policy and best practice.

Furthermore, the document is intended to provide all examiners with a convenient and current reference on how to perform their examining duties. It is essential that examiners use current and standardised practices. The instructions, policy and guidance detailed in this document are for examiners conducting skill tests/ proficiency checks for Class Ratings on Single-Pilot Aeroplanes (SP (A)) for Malta and EASA licences. Additional guidance material is also included. In accordance with ARA.205, Examiners shall comply with the instructions, policy and Guidance contained herein.

References and extracts from Part-FCL are for guidance only. Competent authorities and examiners shall not rely on those references and extracts unless they are checked against the most recent version of the Aircrew Regulation and its relevant AMC and GM material. Where the content of this document conflicts with EASA official publication, the official publication must be used.

0.5 Introduction and Limitations

TM-CAD issues flight crew licences and ratings in accordance with the requirements of the Part FCL and Part ARA. TM-CAD shall ensure that the applicant of a licence or rating has qualified by reason of knowledge, competence and skill to hold the appropriate licence or rating. TM-CAD will therefore certify suitably experienced and qualified pilots as examiners to conduct the necessary skill tests or proficiency checks.

An examiner shall hold a certificate detailing the privileges that he may exercise. In this role, the examiner shall be mindful that he/she is performing a function on behalf of Malta and European Law even when conducting Skills Tests (ST) or Licence Proficiency Checks (LPC) within his own company.

Skill tests/proficiency checks that are carried out on Malta issued licence holders shall be conducted in accordance with this document. Knowledge of this document and its practical application is vital for the examiner's conduct and assessment of skill tests or proficiency checks. Any advice concerning the conduct of skill tests and proficiency checks may be obtained from TM-CAD Personnel Licensing Unit on email – cadpel.tm@transport.gov.mt. Every examiner is responsible to check the latest version of this manual before conducting check flights. Feedback is highly appreciated and can be sent to TM-CAD Personnel Licensing Unit.

It is mandatory for pilots to inform Licensing Applications (cadpel.tm@transport.gov.mt) of changes to their contact details.

Any limitation published in this manual must be adhered to with the exception where more restrictive limits are published in the organisation's operation manual or training manual or the aircraft AFM/POH.

0.6 Records and control of document

Name of record	Archive location	Archiving period
Check form, Manual Entry in Licence	Hardcopy	7 years

0.7 Relevant documents

Malta Air Navigation Order
Relevant TM-CAD Skill Test/ Proficiency Check and Report Forms
EASA Examiner Differences Document
PEL Notice 49
PEL Notice 50
PEL Notice 57
PEL Notice 68

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0.8 Limitations for check flights on AEROPLANES

Part-FCL.1005 states an examiner shall not conduct:

1. skill tests or assessments of competence of applicants for the issue of a licence, rating or certificate:

   (1) to whom they have provided more than 25% of the required flight instruction for the licence, rating or certificate for which the skill test or assessment of competence is being taken; or
   (2) skill tests, proficiency checks or assessments of competence whenever they feel that their objectivity may be affected.

Examples of situations where the examiner shall consider if his objectivity is affected are when the applicant is a relative or a friend of the examiner, or when they are linked by economic interests/political affiliations, etc.

<u>During examination flights no additional person without special duties shall be carried on board. Malfunction/Emergency Training:</u>

Before the flight, the examiner must perform a risk assessment especially regarding the planned malfunction/emergency training to determine the magnitude of risk and to establish whether measures are needed to stay within acceptable limits of safety.

1. Malfunction and emergency procedures are only allowed to be performed if the corresponding procedures are published in the manufacturer's manual.
2. Malfunction and emergency training in the aeroplane must be performed via touch drill according to the restrictions of the AFM/POH. The exact procedure must be briefed before the flight. The application priority of the procedure is as follows: first the published manufacturer's procedure and second procedures as trained by the ATO.
3. Pulling of circuit breakers in the aeroplane during flight or ground manoeuvres for the simulation of malfunctions and emergencies is forbidden.
4. Actual engine shut down on the aeroplane is only allowed to be performed if required by the rules established in Part-FCL and if a corresponding procedure is available in the AFM/POH. The following limitations must be applied:
   I. Minimum altitude 3000ft AGL.
   II. VMC.
   III. Visual contact to the ground.
   IV. Within reasonable distance to assure landing (depending on aircraft specifications)
   V. ATC informed (if applicable).
   VI. Procedures and limitations according AFM/POH must be applied.
5. Minimum altitude for steep turns is 3000 ft above GND.
6. Conditions required for stalling exercises and unusual attitude recoveries:
   I. Minimum altitude 3000 ft AGL.
   II. VMC and commenced after the area is confirmed clear of other aircraft
   III. Visual contact to the ground and away from built up areas
   IV. Stall recovery procedure must be initiated at the onset of stall warning, perceptible buffet, clean stall or other response to the initial stall entry (depending on requirements for skill test as per Part-FCL).
   V. This exercise must be briefed extensively before the flight.

7. Simulated engine failure after T/O for SE aircraft:
   I. Minimum altitude 300ft above GND.
   II. This exercise must be briefed extensively before the flight.

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Planning criteria for check flights:

1. Every limitation published in AFM/POH/OM strictly applies. Wind gusts above the limit are not acceptable.
2. No flights are to be conducted disregarding MEL/CDL limits (if published).
3. T/O under weather conditions below LDG minimum is only allowed with a planned T/O alternate.
4. Lowest WX minimum for SE aeroplanes under IFR en-route: 1000ft cloud base / 1.5 km horizontal visibility
5. No flight shall be commenced without required documents and associated obligations regarding valid rules and regulations.
6. No flight shall be commenced without valid charts, updated database and flight planning documentation appropriate to the flight rules.

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Chapter 1 – General Requirements

1.1 Register of Examiners

Transport Malta Civil Aviation Directorate, PEL Unit will maintain a register of examiners, containing the files of examiners who meet the requirements for the approvals sought.

Applicants for an examiner certificate shall demonstrate relevant knowledge, background and appropriate experience related to the privileges of an examiner; this may include the personality and character of the applicant and their cooperation with TM-CAD. TM-CAD shall also consider whether the applicant has been convicted of any relevant criminal or other offenses, considering Malta national law and principles of non-discrimination.

Applicants for an examiner certificate shall demonstrate that they have not been subject to any sanctions including suspension, limitation or revocation of any of their licences, ratings or certificates issued in accordance with the Aircrew Regulation, for non-compliance with the Basic Regulation and its Implementing Rules during the last three years.

An FE, CRE, IRE and FIE shall hold a valid Class 1 or Class 2 Medical Certificate issued in accordance with Part-MED (as required depending on the privileges of the licence).

1.2 Examiners

Examiners shall hold an equivalent licence, rating or certificate to the ones for which they are authorised to conduct skill tests, proficiency checks or assessments of competence and the privileges to instruct for them.

Examiners shall be qualified to act as pilot-in-command on the aircraft during a skill test, proficiency check or assessment of competence when conducted on the aircraft.

Examiners must be:

- Fit, firm and fair (objective) for their duty when carrying out examiner privileges.
- Fill out correctly all relevant documents
- Aware that they are responsible to Transport Malta - Civil Aviation Directorate only and not to an operator or approved training organisation.
- Aware of the main purpose of a test or check:
    1. Determine through practical demonstration during a test or check that an applicant has acquired or maintained the required level of knowledge and skill or proficiency.
    2. Improve training and flight instruction in ATOs by feedback of information from examiners about items or sections of tests or checks that are most frequently failed.
    3. Assist in maintaining and, where possible, improving air safety standards.

In case of a fail of the conduction of the check the examiner must inform the applicant that the second attempt must be conducted by an examiner explicitly designated by the competent authority.

<u>Special conditions</u>
In the case of introduction of a new aircraft to the Member State or in an operator's fleet, when compliance with the requirements of Part-FCL is not possible, TM-CAD may issue a specific certificate giving privileges for the conduct of skill tests and proficiency checks. Such a Certificate shall be limited to the skill tests and proficiency checks necessary for the introduction of the new type of aircraft and its validity shall not, in any case, exceed 1 year.

Examination outside the territory of the Member States

In the case of skill tests and proficiency checks provided in an ATO located outside the Malta, TM-CAD may issue an examiner certificate to an applicant holding a pilot licence issued by a third country in accordance with ICAO Annex 1, provided that the applicant:

a) holds at least an equivalent ICAO Annex 1 licence, rating, or certificate to the one for which they are authorised to conduct skill tests, proficiency checks or assessments of competence, and in any case at least a CPL;
b) complies with the requirements established in Subpart K for the issue of the relevant examiner certificate; and
c) demonstrates to TM-CAD an adequate level of knowledge of European aviation safety rules to be able to exercise examiner privileges.

The certificate referred to above shall be limited to providing skill tests and proficiency tests/checks:

a) outside the territory of EASA Member states; and
b) to pilots who have sufficient knowledge of the language in which the test/check is given.

1.3 Examiners assessment of competence

The assessment of competence follows the provisions laid down in FCL.1020.

1.4 Examiner qualifications and roles

There will be four roles of examiners for aeroplane which are covered in this manual:

1. Flight Examiner (FE)
2. Class Rating Examiner (CRE)
3. Instrument Rating Examiner (IRE)
4. Flight Instructor Examiner (FIE)

Pilot-in-Command

When the candidate is occupying a pilot's seat, he/she is the only one with a clear view and full access to the controls, and often is most familiar with the type. He/she must be the PIC and the control of the aircraft is his/her responsibility. However, the Senior examiner/Inspector has an overriding responsibility in avoiding dangerous situations, although he/she has no full access to controls.

Summary of privileges for flight examiners FE (A)

Part-FCL reference:	FCL.1005.FE(a)
Privileges for PPL(A)	Skill tests for the issue of the PPL (A) and skill tests and proficiency checks for associated single-pilot class and type ratings, except for single-pilot high-performance complex aeroplanes, provided that the examiner has completed at least 1 000 hours of flight time as a pilot on aeroplanes or TMGs, including at least 250 hours of flight instruction.
Privileges for CPL(A)	Skill tests for the issue of the CPL (A) and skill tests and proficiency checks for the associated single-pilot class and type ratings, except for single-pilot high-performance complex aeroplanes, provided that the examiner has completed at least 2 000 hours of flight time as a pilot on aeroplanes or TMGs, including at least 250 hours of flight instruction.
Privileges for LAPL(A)	Skill tests and proficiency checks for the LAPL (A), provided that the examiner has completed at least 500 hours of flight time as a pilot on aeroplanes or TMGs, including at least 100 hours of flight instruction.

Summary of privileges for flight examiners CRE (A)

Part-FCL reference:	FCL.1005.CRE
Privileges Single-pilot aeroplanes, except for single-pilot high performance complex aeroplanes	(a) skill tests for the issue of class and type ratings; (b) proficiency checks for: (1) revalidation or renewal of class and type ratings; (2) revalidation of IRs, if they have completed at least 1500 hours as pilots of aeroplanes and have competed at least 450 hours of flight time under IFR (3) renewal of IRs, if they comply with the requirements laid down in point FCL.1010.IRE(a); and (4) revalidation and renewal of BIRs, provided that the CRE has completed: (i) 1 500 hours of flight time as a pilot of aeroplanes; and (ii) 450 hours of flight time under IFR; and (c) skill tests for the extension of LAPL(A) privileges to another class or variant of aeroplane.

Summary of privileges for flight examiners IRE (A)

Part-FCL reference:	FCL.1005.IRE
-	The privileges of the holder of an IRE certificate are to conduct skill tests for the issue, and proficiency checks for the revalidation or renewal of BIRs or IRs.

Summary of privileges for Flight Instructor Examiners FIE(A)

Part-FCL reference:	FCL.1005.FIE(a)
FI(A), CRI(A), IRI(A) and TRI(A) for SP(A)	The privileges of an FIE on aeroplanes are to conduct assessments of competence for the issue, revalidation or renewal of certificates for FI(A), CRI(A), IRI(A) and TRI(A) on single-pilot aeroplanes, provided that the relevant instructor certificate is held.

Record Keeping

Examiners shall maintain records for 5 years with details of all skill tests, proficiency checks and assessments of competence performed and their results.

Upon request by the competent authority responsible for the examiner certificate, or the competent authority responsible for the applicant's licence, examiners shall submit all records and reports, and any other information, as required for oversight activities.

For further details refer to FCL.1030

1.5 Examiner Validity

FE, IRE, CRE and FIE certificates shall be valid for three years and valid until the last day of the month and shall be revalidated in accordance with Part-FCL Subpart K. Consequently, an instructor who is also an examiner may have different expiry dates for the two qualifications.

Examiners shall note that examining privileges may only be exercised when the corresponding instructor qualification is valid.

1.6 Examiners' Standardisation – FCL.1015

Holders of an examiners certificate shall not conduct skill tests, proficiency checks or assessments of competence of an applicant for which the competent authority is not the same as that which issued the examiner's certificate, unless they have reviewed the latest available information containing the relevant national procedures of the applicant's competent authority.

a) For Malta authorised examiners - FCL.1015 paragraph (b)(3) requires all TM-CAD issued examiners to receive a briefing on the national administrative procedures, requirements for the protection of personal data, liability, accident insurance and fees. This will be completed during the Malta Examiner Standardisation Course.
b) All non-Malta Examiners conducting skill tests, proficiency checks or assessments of competence on Malta licence holders are required to be fully conversant with TM-CAD procedures.
c) Also for non-Malta authorised examiners – FCL.1015(c)(1) requires the examiner to inform the competent authority of the applicant of their intention to conduct the skill test, proficiency check or assessment of competence and of the scope of their privileges as examiners in accordance with the latest EASA Examiner differences document;
d) The competent authority is required to develop procedures to designate examiners for the conduct of skill tests (ARA.FCL.205(c)). This procedure can be found in the latest EASA Examiner Differences Document and the latest version of PEL Notice 49.
e) All non-TMCAD authorised examiners wishing to conduct a skill test, proficiency check or assessment of competence on an applicant who holds an EASA pilot license issued by Malta, shall refer to the EASA Examiner Differences Document on the EASA website, FCL.1015(c).
f) TM-CAD is required under ARA.FCL.205(b) to maintain a list of all examiners exercising the privileges of their examiner's certificate within Malta. This list is published and updated on a regular basis.
g) All personal data will be handled in accordance with EU Data Protection Act 2016/679.

Revalidation and Renewal - Part-FCL 1025(b)
To revalidate an examiner certificate, holders shall comply with all the following conditions:

(1) before the expiry date of the certificate, have conducted at least six skill tests, proficiency checks, assessments of competence or EBT evaluation phases during an EBT module referred to in point ORO.FC.231 of Annex III (Part-ORO) to Regulation (EU) No. 965/2012;

(2) Revalidation and renewal criteria for examiner certificates includes the requirement for the holder 'to attend an examiner refresher seminar provided by the competent authority or by an ATO and approved by the competent authority, during the last year of the validity period'.

The examiner refresher seminar will provide refresher training to examiners that covers their knowledge and practical understanding of all elements of the examiner standardisation course syllabus as detailed in AMC1.FCL.1015. It shall also cover changes in regulation and policy which have occurred since the delegate examiner completed his or her initial examiner standardisation course or last seminar and include subjects as promulgated periodically as required by TM-CAD. TM-CAD will closely monitor provision of this approved activity.

Requirements for examiner seminars are as follows:
- An ATO must hold a specific approval from the TM-CAD to conduct examiner refresher seminars. These are required to be monitored as part of the TM-CAD management system and shall be periodically audited.
- An examiner refresher seminar will normally be a full day course and examiners shall attend the whole of the seminar. To gain maximum benefit from sharing feedback and experience, seminars are ideally held with several candidates present. This will be subject to TMCAD oversight. If one off seminars are required for individuals, the TM-CAD shall be informed.
- The facilitator of the seminar shall either be a TM-CAD Inspector, a Malta Senior Examiner or a FE

course tutor. Other persons may be accepted at the discretion of the TM-CAD. Persons shall be nominated by the ATO for the purpose.

- An examiner shall attend an examiner refresher seminar in the last year of their validity period. Whilst not a formal requirement, it is recommended that examiner attend a refresher seminar prior to conducting an assessment of competence.
- The ATO shall establish a procedure with the TM-CAD for informing TM-CAD of an individual's attendance at a seminar, for example a Course Completion Certificate. Once completed, this shall be sent by the candidate or the ATO to cadpel.tm@transport.gov.mt with any respective application for revalidation of an examiner certificate.

Minimum required syllabus:

- information on the national administrative procedures including designation for the skill tests, licence endorsements when revalidating or renewing a licence,
- correct filling of forms,
- protection of personal data,
- liability,
- accident insurance,
- fees,
- the examiner differences document,
- retention of documents,
- items which raised significant safety concerns locally or in general like runway incursions and runway excursions,
- fundamentals of human performance and limitations relevant to flight examination
- information on new regulations concerning examiners.

(3) One of the skill tests, proficiency checks, assessments of competence or EBT evaluation phases conducted in accordance with (1) above, within the last 12 months immediately preceding the expiry date of the examiner certificate shall have been assessed by an inspector from TM-CAD or by a senior examiner specifically authorised to do so by TM-CAD.

Renewal - Part-FCL 1025(c)

To renew an examiner certificate, the applicants shall comply with the requirements in point (2) and point FCL.1020 in the period of 12 months immediately preceding the application for the renewal.

1.7 Preparation of the examiner refresher seminar

The examiner refresher seminar is prepared by the Head of the Personnel Licensing or an inspector appointed by him/her after consultation with the Safety Unit.

Delivery of the examiner refresher seminar

For FE, CRE, IRE or FIE the examiner refresher seminar is conducted by the Inspector General Aviation.

The part on national administrative procedures, protection of personnel data, liability, accident insurances, fee, filling of forms and information on new regulations can also be provided by a PEL Inspecting Officer or the Head of Personnel Licensing.

1.8 Application and Administration Procedure

For an initial application, once the Examiner Standardisation course has been booked, the examiner applicant will submit an application and the appropriate fee to cadpel.tm@transport.gov.mt. This shall normally be at least 4 weeks before the requested Examiner AoC.
For a revalidation, an application for an Examiner AoC together with the appropriate fee shall first be sent to cadpel.tm@transport.gov.mt a minimum of 4 weeks prior to a requested assessment date.

It is the responsibility of Examiners to notify cadpel.tm@transport.gov.mt immediately of any changes to their circumstances that may affect the validity of the certificate and any privileges attached. Examples of such changes could be: change of aircraft type, ceasing to exercise the privileges of the certificate, loss of licensing privileges and medical fitness.

Fees payable are laid down in the Air Navigation Order Scheme of Charges.

Contact Addresses:
For General Enquiries on Examiner matters, including Certificates and Applications:

Personnel Licensing Department
Civil Aviation Directorate
Transport Malta
Malta Transport Centre
Pantar Road
Lija LJA 2021
Malta

E-mail: cadpel.tm@transport.gov.mt

Chapter 2 – Practical training of examiners

2.1 General

It is intended that all applicants for authorisation must have received a TM-CAD approved initial training before undertaking an acceptance flight with an inspector/senior examiner.

The standards of competence of pilots depend to a great extent on the competence of examiners. Examiners will be briefed by the authority on the air crew regulation requirements, the conduct of skill tests and proficiency checks, and documentation and reporting. Examiners shall also be briefed on the protection requirements for personal data, liability, accident insurance and fees, as applicable in Malta.

Applicants for an examiner certificate shall demonstrate their competence to an inspector from TM-CAD or a senior examiner specifically authorised to do so by TM-CAD responsible for the examiner's certificate through the conduct of a skill test, proficiency check or assessment of competence in the examiner role for which privileges are sought.

2.2 Training Content

Specific flight test and check training
Detailed knowledge of the tests and checks which the authorisation is sought for is required. Training must cover:

1. Knowledge and management of the test which the authorisation is sought for. These are described in the relevant Chapters in this manual.
2. Knowledge of the administrative procedures pertaining to that test/check
3. For an initial examiner authorisation practical training in the examination of the test profile sought is required.
4. An examiner certification acceptance test flight with an inspector or senior examiner designated by the authority, e.g. for FE (PPL) this is to be the PPL skill test.

2.3 Skill Test/Prof Check Standards

Standards of performance are central to a consistent conduction of tests and checks by examiners throughout EASA member states:

1. Examiners shall consistently apply Part-FCL standards during a test/check. However, as the circumstances of each test/check conducted by an examiner may vary, it is also important that an examiner's test/check assessment considers any adverse condition(s) encountered during the test/check.
2. It is emphasised that test/check applicants shall concern themselves only with flying and operating the aeroplane to the best of their ability. Definition of and compliance with the test standards is the responsibility of the examiner. The test standards are depicted in Chapter 3 as a reference for the examiner and applicant
3. The examiner is expected to display sound judgement particularly when establishing any abnormal or simulated emergency exercise so that the safety of the flight is never placed at risk.
4. Throughout the flight compliance with briefing/checklists, procedures, anti-icing and de-icing precautions, airmanship, ATC liaison and compliance, RT procedures and flight management will be assessed.
5. Examiners are reminded that applicants may appeal against the conduct of any test/check in accordance with EASA regulations and the procedure in the Malta ANO.

Note: The examiner shall be the Pilot-in-Command, except in circumstances agreed by the examiner.

Conduct of the test/check

1. The test/check is a two-attempt test/check. The applicant shall fly all items at attempt number one (first attempt) prior to retesting any item (attempt number two). There may be some exceptions. When conducting the test/check in an aircraft, it may be inappropriate or impossible to complete the first attempt due to ATC or external influences. This flexibility would not be appropriate or required during FSTD testing/checking.

2. Failure in any item of a section will cause applicants to fail the entire section.

3. Failure of only one section, will give a partial pass and the candidate shall repeat only that section.

4. Failure in more than one section will require applicants to repeat the entire test or check.

5. Failure in any section in the case of a retest or recheck, including those sections that have been passed on a previous attempt, will require applicants to repeat the entire test or check again. For single-pilot multi-engine aeroplanes, Section 6 of the relevant test or check, addressing asymmetric flight, shall be passed.

6. If the skill test/proficiency check is terminated for reasons considered adequate by the examiner only those sections not completed shall be tested in a further flight. If any items were failed on the first flight, all items not completed on the first attempt shall be tested separately, before any retest is undertaken.

7. If an applicant fails to achieve a satisfactory standard in an item, he will be re-tested in that item. Such re-tests shall be indicated on company training records and the TM-CAD form. The examiner may stop the test/check at any stage if it is considered that the applicant's competency requires a complete re-test or re-check.

UPRT

a) With EU Commission Regulation No. 2019/1974, Appendix 9 has been revised at Section 7.
b) For licensing purposes, this is not a mandatory test or proficiency check item..
c) Examiners shall check that training in these items have been completed prior to completing a skills test. Additionally, examiners shall periodically test skills.
d) Exercises shall be completed in the pilots normal operating seat and each pilot tested as PF.

GM1 to Appendix 9 Training, skill test and proficiency check for MPL, ATPL, type and class ratings, and proficiency check for IRs

TYPE SPECIFIC UPRT AND GO-AROUND TRAINING IN FSTD

(a) General

(1) The upset recovery training exercises shall be mainly manoeuvre-based but may include some scenario-based training elements. The manoeuvre-based training enables type rating applicants to apply their handling skills and recovery strategy whilst leveraging CRM principles to return the aeroplane from an upset condition to a stabilised flight path.

(2) If training is conducted in an FSTD, it is important that applicants understand the limitations of the FSTD in replicating the physiological and psychological aspects of upset recovery exercises.

Note: In order to avoid negative training and negative transfer of training, the ATO shall ensure that the selected upset recovery exercises take into consideration the limitations of the FFS.

(b) Stall event recovery in FSTD (Appendix 9, Section B(5) exercise 7.2.1; Section B(6) exercise 3.7.1)

(1) It is of utmost importance that stall event recovery training takes into account the capabilities of the FFS used. To deliver stall event recovery training, the FFS shall be qualified against the relevant UPRT elements of CS-FSTD Issue 2. Stall event recovery training shall include training up to the stall (approach-to-stall). Post-stall training may be delivered provided the device has been qualified against the relevant optional elements of CS-FSTD Issue 2 and the operator demonstrates that negative training or negative transfer of training is avoided. A 'stall event' is defined as an occurrence whereby the aeroplane experiences one or more conditions associated with an approach-to-stall or a post stall.

(2) Stall event recovery training shall emphasise the requirement to reduce the AoA whilst accepting the resulting altitude loss. High-altitude stall event training shall be included so that flight crew experience the aeroplane control response, the significant altitude loss during the recovery, and the increased time required to recover. The training shall also emphasise the risk of triggering a secondary stall event during the recovery.

(3) Recovery from a stall event shall always be conducted in accordance with the stall event recovery procedures of the OEMs.

Note: If an OEM-approved recovery procedure does not exist, ATOs shall develop and train the aeroplane-specific stall recovery procedure based on the template in Table 1 below. Refer to Revision 3 of the Airplane Upset Prevention and Recovery Training Aid (AUPRTA) for a detailed explanation and rationale of the stall event recovery template as recommended by the OEMs.

Table 1: Recommended stall event recovery template

Stall event recovery template		
Pilot Flying (PF) Immediately do the following at first indication of a stall (aerodynamic buffeting, reduced roll stability and aileron effectiveness, visual or aural cues and warnings, reduced elevator (pitch) authority, inability to maintain altitude or arrest rate of descent, stick shaker activation (if installed)) during any flight phases *except at lift-off*.		**Pilot Monitoring (PM)**
1.	**AUTOPILOT — DISCONNECT** (A large out-of-trim condition could be encountered when the autopilot is disconnected)	**MONITOR** airspeed and attitude throughout the recovery and **ANNOUNCE** any continued divergence
2.	**AUTOTHRUST/AUTOTHROTTLE — OFF**	
3.	**(a) NOSE-DOWN PITCH CONTROL** apply until stall warning is eliminated **(b) NOSE-DOWN PITCH TRIM** (as needed) (Reduce the AoA whilst accepting the resulting altitude loss.)	
4.	**BANK — WINGS LEVEL**	
5.	**THRUST — ADJUST** (as needed) (Thrust reduction for aeroplanes with underwing-mounted engines may be needed)	
6.	**SPEEDBRAKES/SPOILERS — RETRACT**	
7.	When airspeed is sufficiently increasing — **RECOVER** to level flight (Avoid the secondary stall due to premature recovery or excessive G-loading)	

(c) Nose-high and nose-low recovery exercises (Appendix 9, Section B(5) exercise 7.2.2; B(6) exercise 3.7.2)

Nose-high and nose-low recovery exercises shall be conducted in accordance with the strategies recommended by the OEMs contained in Tables 2 and 3 below.

Note: As the OEM procedures always take precedence over the recommendations, ATOs shall consult the OEM on whether any approved type-specific recovery procedures are available prior to using the templates.

Refer to Revision 3 of the Airplane Upset Prevention and Recovery Training Aid (AUPRTA) for a detailed explanation and rationale of nose-high and nose-low recovery strategies as recommended by the OEMs.

Table 2: Recommended nose-high recovery strategy template

Nose-high recovery strategy template		
Either pilot — Recognise and confirm the developing situation by announcing **'nose high'**		
PF		**PM**
1.	**AUTOPILOT — DISCONNECT** (A large out-of-trim condition could be encountered when the autopilot is disconnected)	**MONITOR** airspeed and attitude throughout the recovery and **ANNOUNCE** any continued divergence
2.	**AUTOTHRUST/AUTOTHROTTLE — OFF**	
3.	APPLY as much nose-down control input as required to obtain a nose-down pitch rate	
4.	**THRUST — ADJUST** (if required) (Thrust reduction for aeroplanes with underwing-mounted engines may be needed)	
5.	**ROLL — ADJUST** (if required) (Avoid exceeding 60-degree bank)	
6.	When airspeed is sufficiently increasing — **RECOVER** to level flight (Avoid the secondary stall due to premature recovery or excessive G-loading)	
NOTE: (1) Recovery to level flight may require use of pitch trim. (2) If necessary, consider reducing thrust in aeroplanes with underwing-mounted engines to aid in achieving nose-down pitch rate. (3) **WARNING**: Excessive use of pitch trim or rudder may aggravate the upset situation or may result in high structural loads.		

Table 3: Recommended nose-low recovery strategy template

Nose-low recovery strategy template		
Either pilot — Recognise and confirm the developing situation by announcing **'nose low'** (If the autopilot or autothrust/autothrottle is responding correctly, it may not be appropriate to decrease the level of automation while assessing if the divergence is being stopped)		
	PF	**PM**
1.	**AUTOPILOT — DISCONNECT** (A large out-of-trim condition could be encountered when the autopilot is disconnected)	**MONITOR** airspeed and attitude throughout the recovery and **ANNOUNCE** any continued divergence
2.	**AUTOTHRUST/AUTOTHROTTLE — OFF**	
3.	**RECOVERY** from stall if required	
4.	**ROLL** in the shortest direction to wings level (It may be necessary to reduce the G-loading by applying forward control pressure to improve roll effectiveness)	
5.	**THRUST** and **DRAG — ADJUST** (if required)	
6.	**RECOVER** to level flight (Avoid the secondary stall due to premature recovery or excessive G-loading.)	
NOTE: (1) Recovery to level flight may require use of pitch trim. (2) **WARNING**: Excessive use of pitch trim or rudder may aggravate the upset situation or may result in high structural loads.		

(d) Go-around with all engines operating from various stages during an instrument approach (Appendix 9, Section B(5) exercise 7.3; B(6) exercise 4.1.)

(1) The objective of the go-around exercises is to expose the student pilot to the physiological effects caused by a go-around. The instructor shall ensure that student pilots understand the objective of the exercises and provide students with appropriate coping strategies, including TEM. Due consideration shall be given to environmental conditions when evaluating the demonstration of task proficiency and related criteria.

(2) A go-around may be commenced at any time during an approach, including before the aeroplane is in the landing configuration. Historically, most go-around training has been conducted when the aeroplane is in the landing configuration prior to commencing the go-around. Students must be prepared to adapt the go-around manoeuvre if the go-around is commenced prior to the point where the aeroplane is fully configured for landing. Situation awareness in relation to flap and gear configuration, aeroplane speed and missed approach altitude is important.

(3) Unanticipated go-arounds may startle the students (e.g. unexpected ATC constraints, automation malfunction, adverse weather, etc.). Students may find themselves faced with a situation where they have to perform a large number of critical actions under a high workload (e.g. setting thrust, landing gear retraction, flight path management). The instructor shall explain that there is also a possibility of disorientation during a go-around because of the somatogravic effect produced by large longitudinal acceleration felt by the inner-ear as the aeroplane speed increases. This effect cannot be reproduced in an FSTD.

(4) It is vital that the correct pitch attitude is selected and maintained, while the aeroplane is kept in trim as it accelerates (depending on the aeroplane type). On some aeroplane types with under-slung engines the pitch response with all engines functioning may be amplified due to the relatively low gross weight towards the end of a flight and the high thrust available from modern aeroplane engines. It is particularly important that trim changes are anticipated on such aeroplanes.

(5) ATOs shall develop scenarios for go-around training containing different take-off and approach stall situations that also involve surprise and startle effects and include:
   (i) a go-around from the non-landing configuration;
   (ii) a go-around at low gross weight using maximum go-around thrust;
   (iii) a go-around from the outer marker or equivalent point;
   (iv) a go-around below 500 ft using, as applicable/permitted, reduced go-around thrust;
   (v) a go-around initiated above the published missed approach altitude; and
   (vi) a normal go-around from the landing configuration using reduced go-around thrust (if available / type-specific).

(6) Training shall also incorporate topics such as flight path management (manual and automatic), application of procedures, startle factors, communication, workload management and situation awareness. The objective of this training is to highlight:
   (i) differences to procedures when the aircraft is in the non-landing configuration;
   (ii) differences in handling characteristics at low gross weights and high thrust settings;
   (iii) the threat associated with go-arounds close to the published missed approach altitudes;
   (iv) startle and surprise associated with an unplanned go-around (ATC, blocked runway, etc.);
   (v) the importance of effective communication between flight crew;
   (vi) the requirement to be aware of the aircraft energy state during a go-around; and
   (vii) the importance of engaging the autopilot or flight director in the correct modes during a go-around.

(7) Go-around training shall not be limited to addressing the somatogravic effects caused by a go-around. Training shall also cover topics such as flight path management (manual and automatic), application of procedures, startle factor, communication, workload management and situation awareness. Flight path management training shall address:
   (i) the handling differences of a lighter than normal aircraft which may differ to handling experienced during take-off when the aircraft is much heavier;
   (ii) the different reaction of the aeroplane (pitch and vertical speed) comparing a go-around performed with reduced G/A thrust (if the function is available) and a go-around performed with full G/A thrust (a different weight).

(8) The importance of correct selection of TO/GA modes by the PF shall also be emphasised (pushing TO/GA, selected the correct thrust lever detent, etc.)

(9) The importance of the PM role in the go-around manoeuvre shall also be highlighted. The PM usually has higher workload as they need to reconfigure the aircraft, engage FMA modes, communicate with ATC and monitor the actions of the PF. This excessive workload for the PM may lead him or her to prioritise actions to the detriment of monitoring activities. The phenomenon of attentional tunnelling may also need to be addressed. This happens when one pilot, or both, focus exclusively on a problem at the expense of general monitoring of the flight parameters.

2.4 Pre-flight briefing

Examiner approach

The performance of an applicant under test conditions will often be adversely affected by some degree of nervous tension, but the examiner can do much to redress the balance in his/her favour by the adoption of a friendly and sympathetic attitude.

An examiner shall create a friendly and relaxed atmosphere both before and during a test or check flight. A negative or hostile approach shall be avoided.

Any suggestion of haste during briefing shall be avoided and the applicant shall be encouraged to ask as many questions as he/she wishes at the conclusion of each section. Clear and unhurried instructions at this stage will not only serve to put the applicant at ease but will ensure when airborne that the flight proceeds smoothly and without unnecessary delay.

Construction of the briefing
The pre-flight briefing may be conducted as one or more separate elements to give the applicant the maximum opportunity to understand and prepare what is expected of him/her.

Briefing content
The applicant shall be given ample time and facilities to prepare for the test flight. The briefing shall cover at least the following:

1. safety objectives pertinent to the conduct of the check or test
2. any limitations or tolerances against which the check or test will be assessed
3. the objective of the flight
4. licence checks, as necessary
5. freedom for the applicant to ask questions
6. operating procedures to be followed (e.g. operators manual)
7. weather assessment
8. operating capacity of applicant and examiner
9. aims to be identified by the applicant
10. simulated weather assumptions (e.g. icing, cloud base)
11. contents of exercise to be performed
12. agreed speed and handling parameters (e.g. V-speeds, bank angle)
13. use of RT
14. respective roles of applicant and examiner (e.g. during emergency)
15. administrative procedures (e.g. submission of flight plan) in flight

Examiner training must focus on the requirements to maintain the necessary level of communication with the applicant. The following check details shall be followed by the examiner applicant:

1. the need to give the ‘applicant’ precise instructions
2. responsibility for a safe conduction of the flight
3. intervention by the examiner when necessary
4. liaison with ATC and the need for concise, easily understood intentions
5. prompting the ‘applicant’ regarding required sequence of events (e.g. following a go-around)
6. keeping brief, factual and unobtrusive notes

Applicant’s planning and facilities
The examiner shall conduct each test/check in such a manner as to stay in conformity with the guidance given by the authority such that each applicant is allowed adequate time for the test, normally not more than one hour. Adequate planning facilities must be available. The examiner will check that the applicant is aware of where resources are. A quiet briefing room shall be used so that the planning can be completed without interruption or distraction.

Planning shall be completed without assistance from other students or instructors. Current ATC and meteorological information must be obtained.

A flight log shall be prepared, and the examiner may request a copy. The log may include such items as:

1. Route (including flight to the planned alternate aerodrome)
2. Communication and navaid frequencies (note that where this information is clearly displayed on planning documents, such as the charts to be used, it is not necessary to copy it into the log)
3. Planned levels and altitudes
4. Timings, ETAs
5. MSA, safety height or minimum levels/altitudes
6. Fuel (showing contingency fuel and space to plot fuel remaining at way points)
7. Space for logging ATIS and clearances in a chronological order. The route may require flight through airspace other than Class G airspace and consideration shall be given to any special precautions during planning.

Planning and preparation must be completed by the crew, using material acceptable to the authority. Computerised flight/navigation plans or aeroplane mass and balance calculations may be used during the allowed planning period. The applicant remains solely responsible for all planning calculations.

Applicants will be required to calculate take-off and landing performance for the conditions prevailing, usually for the most limiting runway expected on the flight.

2.5 Airmanship

Airmanship is the consistent use of good judgment and well-developed skills to accomplish flight objectives. This consistency is based on a cornerstone of uncompromising flight discipline and is developed through systematic skill acquisition and proficiency. A high state of situational awareness completes the airmanship picture and is obtained through knowledge of oneself, the aircraft, the whole environment, including other crewmembers, if applicable, and associated risks.

<u>How the examiner assesses airmanship</u>
Most aviation accidents and incidents happen due to poor crew resource management by the pilot. Fewer happen due to technical failures. However, Pass/Fail judgements based solely on airmanship issues must be carefully chosen since they may be entirely subjective.

It is therefore the examiner's role to observe how the applicant manages the resources available to him/her to achieve a safe and uneventful flight. The examiner must conclude that the success of the flight was a result of good airmanship and not good luck.

If the applicant shows early and consistent awareness of airmanship considerations (e.g. repetitive checking of icing conditions in a level cruise clear of icing conditions) the examiner may allow the applicant to brief only changes during the remainder of the flight.

Examiners themselves are required to exercise proper airmanship competencies in conducting tests/checks as well as expecting the same from applicants.

The foundations of airmanship

KNOWLEDGE

Knowledge of aircraft
- Deep understanding of aircraft sub-systems, emergency procedures, cockpit automation, aircraft flight characteristics and operating limits.
- Knowledge of environment
    - Understanding of the physical environment and the effects on aircraft control.
    - Understanding of the regulatory environment.
    - Understanding of the organizational environment and the challenges posed to airmanship.

Knowledge of risk
- Understanding the risks to discipline, skill and proficiency, knowledge, situational awareness, judgement, aircraft.

SKILLS
- Physical skills
    - Flying skills
    - Navigation skills
    - Instrument flying
    - Emergency handling / recovery

- Flight deck management skills
    - Avoiding the pitfalls of automation (over-reliance, complacency, bias)
    - Information management skills

- Communication skills
    - Vigilance in monitoring communication
    - Using appropriate communication (phraseology, clear, concise)
    - Active listening - inquiry through communication

- Cognitive skills
    - Understanding and maintaining situational awareness
    - Problem solving / decision-making skills
    - Understanding and managing workload
    - Self-assessment

- Team skills
    - Performance monitoring
    - Leadership/initiative
    - Interpersonal skills
    - Co-ordination & decision-making
    - Team communication

ATTITUDE
Positive attitude (e.g. openness and honesty) foster trust among members of the flight crew. This trust, in return, can increase personal confidence and the ability to accomplish a task efficiently and safely. While trust can be earned, it must also be given. Lack of trust within a team or flight crew can increase risk during operations. Even though trust can aid in team building, team members shall never accept a decision, action

or proposed action without checking to see if it is correct for the situation. A good rule is to trust but verify. Insist that other team members do the same for your actions and decisions.

Examples for negative attitude as listed below are ones that have been shown to increase accident likelihood.

- Anti-authority
- Impulsiveness
- Invulnerability
- Machismo
- Resignation
- Complacency

Pilots must be able to recognize and correct their negative attitude before considering the attitude of other crewmembers. Understanding the five main negative and hazardous attitudes, the antidotes and the impact on airmanship is essential.

Hazardous attitude	Antidote
Anti-authority: "Regulations are for someone else."	"Follow the rules. They are that way for a reason."
Impulsivity: "I must act now, there's no time"	"Not so fast. Think first"
Invulnerability: "It won't happen to me"	"It could happen to me"
Macho: "I'll show you. I can do it"	"Taking chances is foolish"
Resignation: "What's the use?"	"Never give up. There is always something I can do"

2.6 Situational Awareness

For a pilot, situational awareness means having a mental picture of the existing inter-relationship of location, flight conditions, configuration and energy state of the aircraft as well as any other factors that could be about to affect its safety such as proximate terrain, obstructions, airspace reservations and weather systems. The potential consequences of inadequate situational awareness include CFIT, loss of control, airspace infringement, loss of separation, or an encounter with wake vortex turbulence, severe air turbulence, heavy icing or unexpectedly strong head winds.

2.7 Assessment System

Factors affecting evaluation

<u>Comparing candidates with each other</u>
When working with a group of candidates, there may be a tendency to compare one candidate to the other. It's a natural thing to do. When conducting a flight test, however, compare the candidate's performance to the standard expressed in the *Performance Criteria,* not to a person who is more or less skilled. The reason for this is to give the candidate a fair and valid flight test.

<u>Characteristics of evaluation</u>
An evaluation may become useless if certain principles are not respected. The following four characteristics, when used carefully in the conduct of a flight test, will result in an accurate and effective evaluation.

1. RELIABILITY
Reliability ensures consistent results. As applied to the flight test, this would mean that two identical performances shall result in the same flight test score.

Human factors can have a significant effect on flight test reliability. Some of these factors are:

- fatigue - insufficient sleep or rest prior to the test
- emotions - work or personal problems at home
- health - cold, flu, etc.
- time of day - very early in the morning, or last trip of the day
- distractions - noise, interruptions, etc.

Examiners shall be aware of those factors and attempt to limit their effects as much as possible because they may result in a lack of smoothness or accuracy in the candidate's performance. Examiners shall also be aware that their ability to accurately assess the candidate`s performance could be adversely affected by these same factors.
Testing for the purpose of licensing must remain clearly distinguished from training in order to maintain the reliability of an evaluation. For example, a second or third attempt, in air flight test items, may give the candidate the immediate practice needed to demonstrate a manoeuvre adequately. For this reason, an item will not be repeated unless one of the following conditions applies:

- Discontinuance of a manoeuvre for valid safety reasons, i.e., a go-around or other procedure necessary to modify the originally planned manoeuvre.
- Collision avoidance: examiner intervention on the flight controls to avoid another aircraft that the candidate could not have seen due to position or other factors.
- Misunderstood request: a legitimate instance when a candidate does not understand an examiner's request to perform a specific manoeuvre. A candidate's failure to know the requirements of a specified manoeuvre is not grounds for repeating a task or manoeuvre.
- Other factors: any condition where the examiner was distracted to the point that the candidate's performance of the manoeuvre (radio calls, traffic, etc.) could not adequately be observed.

2. VALIDITY
Assessment of ground and air items must remain within the limits of the appropriate flight test standards. The scope of the test must be such that when candidates pass, they have met the skill requirements for the issuance of the certificate, licence or rating sought.

3. COMPREHENSIVENESS
A test is comprehensive if it contains a sample of all course material and measures of each area of skill and knowledge required to ensure the standard is met. Flight tests will be *comprehensive* if the examiner adheres to the items listed in the applicable Chapters with no additions or deletions.

4. OBJECTIVITY
Objectivity ensures the examiner´s personal opinions *will not* affect the outcome or assessment of the test. Marks awarded must be made in accordance with the applicable performance criteria. Flight test marks are influenced to some degree by subjective opinions. Assessments will be more valid, less subjective, if the examiner is an experienced pilot, has sound and adequate background knowledge of the evaluation process and the expertise to accurately assess flight test applicants without prejudice.

2.8 The components of Threat and Error Management (TEM) Model

There are three basic components in the TEM framework:

1. Threats- events or errors that occur beyond the influence of acting persons, increase operational complexity, must be managed to maintain the margins of safety.
2. Errors - actions or inactions by somebody that lead to deviations from organizational or operational intentions or expectations. Unmanaged and/or mismanaged errors frequently lead to undesired states. Errors in the operational context thus tend to reduce the margins of safety and increase the probability of an undesirable event.

3. Undesired states - operational conditions where an unintended situation results in a reduction in margins of safety. Undesired states that result from ineffective threat and/or error management may lead to compromised situations and reduce margins of safety aviation operations. Often considered the last stage before an incident or accident.

TEM proposes that threats (such as adverse weather), errors (such as a pilot selecting a wrong automation mode), and undesired aircraft states (such as an altitude deviation) are everyday events that flight crews must manage to maintain safety. Therefore, flight crews successfully managing these events regardless of occurrence are assumed to increase their potential for maintaining adequate safety margins.

Threat Definition

Threats are defined as events or errors that:

- occur outside the influence of the flight crew (i.e. not caused by the crew);
- increase the operational complexity of a flight; and
- require crew attention and management for safety margins being maintained.

Using this definition, a threat can be high terrain, adverse weather conditions, an aircraft malfunction (e.g., inoperative thrust reverser), or other people's errors, such as an inaccurate recording of a fuel load by a dispatcher. All these events occur outside of the influence of the flight crew, yet they add to the crew's workload and need to be managed. Sometimes they can be managed independently and sometimes they interact with one another further complicating the necessary management.

Threat management can be broadly defined as how crews anticipate and/or respond to threats. A mismanaged threat is defined as a threat that is linked to or induces flight crew error. Some of the common tools and techniques used in commercial aviation to manage threats and prevent crew errors include reading weather advisories, turning weather radar on early, thorough walk-arounds during pre-departure, correct use of procedures to diagnose unexpected aircraft malfunctions, briefing an alternate runway in case of a late runway change, briefing crew members as to acceptable times and reasons for interruptions, and loading extra fuel when the destination airport is in question due to poor weather or restricted access.

Error Definition

Errors are defined as flight crew actions or inactions that:

- lead to a deviation from crew or organizational intentions or expectations;
- reduce safety margins; and
- increase the probability of adverse operational events on the ground or during flight.

Flight crew errors can be divided into three types:

1. Aircraft handling errors: Aircraft handling errors are those deviations associated with the direction, speed and configuration of the aircraft. They can involve automation errors, such as dialling an incorrect altitude, or hand-flying errors, such as getting too fast and high during an approach.
2. Procedural errors: Procedural errors are flight crew deviations from regulations, flight manual requirements or aircraft operating procedures.
3. Communication errors. Communication errors involve a miscommunication between the pilots, or between the crew and external agents such as ATC controllers, flight attendants, and ground personnel.

Error management is an inevitable part of learning, adaptation, and skill maintenance. Hence, a primary driving force behind TEM is to understand what types of errors are made under what circumstances (i.e., the presence or absence of which threats) and how crews respond in such situations. For example: do crews detect and recover the error quickly, do they acknowledge the error but do nothing, perhaps because they believe it is inconsequential or will be trapped later, or do they only "see" the error when it escalates to a more serious undesired aircraft state? This is the heart of error management: detecting and correcting errors.

An error that is not detected cannot be managed.

An error that is detected and effectively managed has no adverse impact on the flight. On the other hand, a mismanaged error reduces safety margins by linking to or inducing additional error or an undesired aircraft state.

Undesired Aircraft State (UAS)
An undesired aircraft state (UAS) is defined as a position, speed, attitude, or configuration of an aircraft that:

- results from flight crew error, actions, or inaction; and
- clearly reduces safety margins

In other words, a UAS is a safety compromising state that results from ineffective error management. Examples include unstable approaches, lateral deviations from track, hard landings, and proceeding towards the wrong taxiway/runway.

As with errors, UASs can be managed effectively, returning the aircraft to a safe flight condition, or mismanaged, leading to an additional error, undesired aircraft state, or worse, an incident or accident.

TEM Tools & Techniques
Some tools - the “hard” safeguards - are associated with aircraft design, and include automated systems, instrument displays, and aircraft warnings. The Traffic Collision Avoidance System (TCAS), which provides flight crews with visual and audio warnings of nearby airplanes to prevent mid-air collisions, is a good example of a “hard” TEM safeguard. However, even with the best designed equipment, these “hard” safeguards are not enough to ensure effective TEM performance.

Other tools - the “soft” safeguards - are very common in aviation. They include regulations, standard operating procedures, and checklists to direct pilots and maintain equipment and licensing standards, checks and training to maintain proficiency.

With the hard and soft safeguards in place, the last line of defence against threat, error and undesired aircraft states is still and ultimately the flight crew. Checklists only work if flight crews use them, the autopilot only works when being engaged in the correct mode.

The TEM philosophy stresses three basic concepts: anticipation, recognition and recovery.

The key to anticipation is accepting that while something is likely to go wrong, you can’t know exactly what it will be or when it will happen. Hence, a chronic unease reinforces the vigilance that is necessary in all safety-critical professions. Anticipation builds vigilance, and vigilance is the key to recognizing adverse events and errors. Recognition leads to recovery. In some cases, particularly when an error escalates to an undesired aircraft state, recovering adequate safety margins is the first line of action: recover first, analyse the causes later.

Examiners shall familiarize themselves with the concept of TEM and examine these principles when assessing general airmanship.

Evaluation Errors
In order to check effectively, the examiner requires not only a sound knowledge of the *characteristics of evaluation*, but also a firm understanding of the possible errors that can occur throughout the *evaluation process*. Errors in evaluation fall into several categories.

Personal Bias Error
Personal bias is indicated by the tendency of an examiner to rate candidates or a particular group of candidates the same. Examiners must conduct all flight tests in accordance with the standards expressed in the applicable flight test guide. An examiner must not allow personal prejudices to interfere with the objective evaluation of a candidate's performance.

Central Tendency Errors
Central tendency errors are indicated by a tendency to rate all or most candidates as *average*. The examiner really "feels" that the performance of most candidates is not as good as it should be and therefore underscores a candidate's good performance. On the other hand, the examiner is reluctant to cope with the possible emotional response of a candidate or a recommending instructor. This results in padded or inflated assessments of poor performance. This error may also occur because an examiner does not want to put effort into deciding. An average mark is easier to defend.

Generosity Errors
Generosity errors are indicated by a tendency to rate all individuals at the *high end* of the scale and are probably the most common type of personal bias. This could be caused by an examiner's desire to be known as a nice person. In this case, all or most candidates are graded at the *low end* of the marking scale. Examiners may feel that the published standards are too low and score the test against their own set of standards. This type of examiner feels that few people can fly as well as they can.

Halo Effect
This occurs when an examiner's impression of a candidate can influence the assessment of performance. Halo error can result in rating an applicant too high or too low. One form of halo error is the error of leniency. Leniency has its source in an examiner's likes, dislikes, opinions, prejudices, moods and political or community influence of people. For example, when testing a friend, acquaintance, or high profile individual, an examiner may give undeservedly high marks or, conversely the error of stereotype.

Stereotype
As with the error of leniency, the error of stereotype has its source in likes, dislikes, opinions, prejudices, etc. In this case, however, an examiner may allow personal opinion or prejudice to influence the assessment of the candidate and award undeservedly low marks or high marks.

Logical error
This assumes that a high degree of ability in one area means a similar degree of competence in another. This is especially true if the two items being assessed are similar or related. A good mark on one or two items does not mean the candidate is also qualified on all items. The full test must be completed and marked.

Error of narrow criterion
This may occur when an examiner has a group of candidates to test. Under this condition the examiner may rate each applicant against the others within the group instead of against the published criteria. If the group to be tested is above average, a candidate who is of average ability may be awarded an undeservedly low mark. If the group of candidates to be tested is below average, then a candidate who performs the best within this group may be awarded a higher assessment than deserved.

Error of delayed grading
This type of error occurs when there is a delay in the assessment of an item, resulting in a tendency to award average marks due to the lack of information and/or poor recall. The use of the top or bottom end of the marking scale would be avoided. By not making an assessment immediately after the event, examiners may award assessments based upon an overall impression of the flight test. This results in an erroneous assessment and a flight test report that is of little value to the training system.

Standards error
All the errors we have discussed result in a standards error. However, if an examiner is not thoroughly familiar with established standards, as outlined in the applicable guidance material, it is virtually impossible to conduct an evaluation to that standard. While these errors may appear obvious on paper, they may not be under flight test conditions, especially as the judgment of the examiner may be obscured by a combination of two or more. Examiners must therefore be aware of these errors to consciously prevent them from influencing the validity of the tests they conduct.

2.9 Oral questions

The examiner uses oral questions to measure and evaluate the extent of aeronautical knowledge and to determine that the candidate meets the standard of knowledge required for the licence or rating being sought.

This is an important part of the flight test and it is the portion of flight testing that results in the greatest variance in standardization. For this reason, it is essential that questions are being prepared beforehand to ensure they are worded correctly and that they are relevant and valid.

It is recommended that the examiner has a bank of questions prepared for all the required items or areas of the oral portion of the test.

It is not intended that all the questions being prepared are to be asked but additional questions would be available at the very moment if this is required. Moreover, a bank of questions will allow the examiner to vary the oral portion of the test from candidate to candidate to some extent.

The prepared questions shall be of a practical operational nature, based upon the aircraft and the trip assigned for the flight test. Theoretical type questions are not recommended on the flight test as this area is covered by the written examinations.

Questions shall be carefully worded and not ambiguous. Good questions are easily understood and composed of common words. They shall measure knowledge, not the use of language. Big words and high sounding phraseology may allow the examiner to display command of language and vocabulary but only detract attention from the test. If candidates cannot understand the meaning of the words, they will not be able to answer the question. Therefore, examiners must keep the vocabulary within the grasp of candidates.

A question shall focus on one idea only. The examiner can guide the candidate through a complex procedure by asking “what”, “why”, “where”, “when” and “how” questions after the basic question has been asked.

Example of a basic question: “What is meant by the term VFR in aviation?”
Answer, “Visual Flight Rules”
Next question might be, “Is the weather VMC for today’s flight?”
Note: This requires a yes/no answer, but you could follow up with “How do you know?” etc.

Keep questions as practical as possible. A flight test is an operational exercise where the candidate demonstrates knowledge and skill by going through an actual flight.
Questions shall get the candidate thinking. Asking a question that requires a YES/NO answer doesn’t really tell the examiner much about the candidate’s level of understanding.

It is more effective to guide the candidate’s thoughts toward the area to be questioned and then ask the question. In this way the candidate can visualize the situation and then think about the answer to the specific question. Knowing that something happens is not as important as understanding why it happens.

Tricky or irrelevant questions shall be avoided. Questions shall be challenging for the candidate but all necessary information to come to the answer must be provided

Handling of candidate answers
The examiner's role is different from the instructor's one. Examiners must strictly observe and evaluate. Instructors are involved in the training experience with the student. They explain, demonstrate, allow students to practice, supervise practice and, finally, evaluate to confirm learning. Examiners shall avoid confirming an answer. Moreover, responding, "No, that's not right" to an answer may undermine a candidate's self-confidence and affect performance for the remainder of the flight test. Examiners shall avoid leading candidates to the correct answer. However, an examiner may ask for clarification. For example: The answer "The nose would pitch down!" to the question "What would happen if the aircraft was loaded with an aft-centre of gravity?" could be followed by a demand to explain what is meant by demonstrating the answer with a model aircraft.

2.10 Definition of strong and weak elements of performance

Error	An action or inaction by the flight crew that leads to a deviation from organizational or flight intentions or expectations
Minor Error	An action or inaction that is inconsequential to the completion of a task, procedure or manoeuvre, even if certain elements of the performance vary from the recommended best practices
Major Error	An action or inaction that can lead to an undesired aircraft state or a reduced safety margin if improperly managed; also an error that does not lead to a safety risk but detracts measurably from the successful achievement of the defined aim of a sequence/item
Critical Error	An action or inaction that is mismanaged and consequently leads to an undesired aircraft state or compromises safety such as: - Non-compliance to mandated standard operating procedures; or - Repeated improper error management or uncorrected and unrecognized threats, with the risk to put the aircraft in an undesired state; or - Repeated major errors
Deviation	A variance in precision with respect to a specified limit published for a manoeuvre within a test item or sequence, which is a result of pilot error or faulty handling of the aircraft.
Minor Deviation	A deviation that does not exceed a specified limit
Major Deviation	A deviation that exceeds a specified limit or repeated minor deviations without achieving stability
Critical Deviation	A major deviation that is repeated, excessive or not corrected, such as: 1. Repeated non-adherence to specified limits; or 2. Not identifying and correcting major deviations; or 3. More than doubling the specified value of a limit.

Consider the following descriptions concerning a candidate's performance of the test sequence/item demonstrated:

Performance is well executed considering existing conditions:
1. Aircraft handling is smooth and positive with a high level of precision.
2. Technical skills indicate a thorough knowledge of procedures, aircraft systems, limitations and performance characteristics.
3. Situational awareness is indicated by continuous anticipation and vigilance.
4. Flight management skills are exemplary, and threats are consistently anticipated, recognized and well managed.
5. Safety margins are maintained through consistent and effective management of aircraft systems and mandated operational protocols.

Performance is observed to include minor errors:

1. Aircraft handling with appropriate control input but includes minor deviations.
2. Technical skills indicate an adequate knowledge of procedures, aircraft systems, limitations and performance characteristics to successfully complete the task.
3. Situational awareness is adequately maintained as candidate responds in a timely manner to cues and changes in the flight environment to maintain safety while achieving the aim of the sequence/item.
4. Flight management skills are effective. Threats are anticipated and errors are recognized and recovered. Safety margins are maintained through effective use of aircraft systems and mandated operational protocols.

Performance is observed to include major errors:

1. Aircraft handling is performed with major deviations and/or an occasional lack of stability, over/under control or abrupt control input.
2. Technical skills reveal deficiencies either in depth of knowledge or comprehension of procedures, aircraft systems, limitations and performance characteristics that do not prevent the successful completion of the task.
3. Situational awareness appears compromised as cues are missed or attended to late or the candidate takes more time than ideal to incorporate cues or changes into the operational plan.
4. Flight management skills are not consistent. Instrument displays, aircraft warnings or automation serve to avert an undesired aircraft state by prompting or remedying threats and errors that are noticed late. Safety margins are not compromised, but poorly managed.

Performance is observed to include critical errors, or the aim of the test sequence/item is not achieved:

1. Aircraft handling is performed with critical deviations and/or a lack of stability, rough use of controls or control of the aircraft is lost or in doubt.
2. Technical skills reveal unacceptable levels of depth of knowledge or comprehension of procedures, aircraft systems, limitations and performance characteristics that prevent a successful completion of the task.
3. Lapses in situational awareness occur due to a lack of appropriate scanning to maintain an accurate mental model of the situation or there is an inability to integrate the information available to develop and maintain an accurate mental model.
4. Flight management skills are ineffective, indecisive or noncompliant with mandated published procedures and corrective countermeasures are not effective or applied.
5. Safety margins are compromised or clearly reduced.

2.11 Pass/Fail criteria

The examiner must check Part-FCL references for pass/fail criteria relevant to the test to be conducted. In general, the guidance is:

In the case of single-pilot aeroplanes, except for single-pilot high-performance complex aeroplanes, the applicant shall pass all sections of the skill test or proficiency check. If any item in a section is failed, that section is failed. Failure in more than one section will require the applicant to take the entire test or check again. Any applicant failing only one section shall take the failed section again. Failure in any section of the re-test or re-check including those sections that have been passed at a previous attempt will require the applicant to take the entire test or check again.

The Result
There are several methods for evaluating an applicant's performance. National authorities may select the method which they wish to use. Two methods will be considered here:

A Grading
B Objective Assessment

B OBJECTIVE ASSESSMENT (This is the preferred method of assessment by TM-CAD)

Satisfactory performance
The ability of an applicant to safely perform the required assignments is based on:

1. Performing the assignments specified in the examiner's manual for the licence or rating sought within the approved standards
2. Demonstrating control of the aeroplane and flight with the successful outcome of each assignment performed never seriously in doubt
3. Demonstrating sound judgement and crew resource management and single-pilot competence if the aeroplane is type certificated for single-pilot operations

Unsatisfactory performance
Consistently exceeding the relevant tolerances or failure to take prompt, corrective action when tolerances are exceeded is indicative of unsatisfactory performance. The tolerances represent the performance expected in good flying conditions. Any action or lack thereof, by the applicant, who requires corrective intervention by the examiner to maintain safe flight, shall be disqualifying. If a repeated item is not clearly satisfactory, the examiner shall consider it unsatisfactory

Examiner standardisation
The check shall be rated with a **'pass'**, provided that the applicant demonstrates the required level of knowledge, skill or proficiency and, where applicable, remains within the flight test tolerances for the licence or rating.

The check shall be rated with a **'fail'** if any of the following applies:

a) the flight test tolerances have been exceeded after the examiner has made due allowance for turbulence or ATC instructions;
b) the aim of the test or check is not completed;
c) the aim of exercise is completed but at the expense of a safe flight, violation of a rule or regulation, poor airmanship or rough handling;
d) an acceptable level of knowledge is not demonstrated;
e) an acceptable level of flight management is not demonstrated;
f) the intervention of the examiner or safety pilot is required in the interest of safety.

The check shall be rated with a **'partial pass'** in accordance with the criteria shown in the relevant skill test appendix of Part-FCL.

2.12 Post flight - debriefing

Post flight procedures will require accurate assessment of the flight and communication of the assessment result to the applicant. During the test or check flight, the examiner shall avoid negative comments or criticisms and all feedback shall be reserved for the debriefing. The examiner must:

1. take the time necessary to consider a fair, unbiased and correct assessment of the test/check
2. make a clear decision on the result of the test/check with precise details of the reason for each failed item indicating any fail result in a friendly but firm manner.
3. where an existing rating has been failed instruct the applicant about the implications of his result
4. explain to the applicant administrative steps required following the result

Having completed the flight and the administration the examiner may then offer clarification of any aspect of the flight. The following points may be discussed:

1. advise the applicant how to avoid or correct mistakes
2. mention any other points of criticism noted
3. give any advice considered helpful

2.13 Complaints and Appeals

If at any time during or after the test a complaint of serious nature is made by an applicant concerning the conduct of his test/check, the examiner shall not become involved into a discussion with the applicant. Complaints or appeals shall be dealt with according to the Malta Air Navigation Order.

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Chapter 3 – Test Standards Aeroplane

This Chapter provides a practical guide to the criteria to be considered by the examiner when assessing each item of Part-FCL aeroplane tests and checks.

3.1 Introductory notes

Using a reference system of 5 phases of flight,-Chapter 3 describes the required performance criteria:

1. Pre-flight operations and ground manoeuvres
2. Take-off, departure route and route sector
3. General air work
4. Holding, approach, landing and G/A procedures
5. Abnormal and emergency procedures

3.2 Pre-flight operations and ground manoeuvers

3.2.1 Technical Knowledge

Aim

Determine the candidate's ability to demonstrate practical knowledge of selected systems, components, normal, abnormal and emergency procedures and operate aircraft systems in accordance with the POH/AFM.

Description

The examiner will conduct an equipment examination requiring the candidate to demonstrate a practical knowledge of the airframe, engine, major components and systems including the normal, abnormal, alternate and emergency operating procedures and limitations relating thereto.

Performance Criteria

Assessment of the candidate's ability to explain the operation of the following systems (as far as applicable):

- landing gear;
- power-plant;
- propellers;
- fuel system;
- oil system;
- hydraulic system;
- electrical system;
- environmental systems;
- Performance Based Navigation (PBN);
- avionics and communications (autopilot; flight director; Electronic Flight Indicating Systems (EFIS); Flight Management System(s) (FMS); Doppler Radar; Inertial Navigation Systems (INS); Global Positioning System (GPS/DGPS/WGPS); VOR, NDB, ILS/MLS, RNAV systems and components; indicating devices; transponder; and emergency locator transmitter);
- ice protection;
- crewmember and passenger equipment (oxygen system, emergency exits, evacuation procedures and crew duties, and quick donning oxygen mask for crewmembers and passengers);
- flight controls (ailerons, elevator(s), rudder(s), winglets, canards, control tabs, balance tabs, stabilizer, flaps, spoilers, leading edge flaps/slats and trim systems);
- pitot-static system with associated instruments and the power source for the flight instruments; and
- systems and components listed above regarding the POH or AFM, the Minimum Equipment List (MEL), if appropriate, and the Operations Specifications, if applicable.

3.2.2 Flight Planning

Aim
Determine the candidate's ability to plan a flight utilizing performance charts, weight and balance calculations, conforming to the VFR or IFR flight rules as applicable and retrieving and interpreting aviation weather information necessary for the safe conduct of the flight.

Description
To determine that the candidate demonstrates knowledge related but not limited to:

- pilot licence privileges and limitations; medical certificate and possible limitations.
- operational information, including NOTAMs and AIP;
- all performance factors for the class/type of aircraft (including mass and balance);
- ensuring that all the required aircraft documentation is valid and available as applicable;
- airworthiness and registration certificates, airworthiness directives;
- Aircraft Flight Manual or other appropriate document (limitations, by heart items)
- relevant and available weather briefing materials;
- classes of airspace;
- preparation of operational flight plan as assigned by the examiner from the departure airport to a destination airport (including navigation logs and charts);
- obtainment and interpretation of weather briefing and factoring conditions into the flight plan;
- preparation of VFR/IFR navigation log (taking account of any NOTAMs);
- establishment of weight and balance for a specific load condition;
- calculation of all relevant performance data required for departure, en-route, and destination;
- fuel calculation.

Performance Criteria
Base the assessment on the candidate's ability to:

- demonstrate practical knowledge of performance and limitations, including the adverse effects of exceeding any limitation;
- demonstrate proficient use of performance charts, tables, graphs, or other data relating to items, such as:
    a. accelerate-stop distance
    b. accelerate-go distance
    c. take-off performance - all engine(s) operating
    d. climb performance including segmented climb performance; with all engines operating, with one or more engine(s) inoperative, and with other engine malfunctions as may be appropriate
    e. service ceiling-all engines, engines(s) inoperative, including drift down, if appropriate
    f. cruise performance
    g. fuel consumption, range, and endurance
    h. descent performance
    i. go-around from rejected landings
    j. other performance data
- describe the airspeeds used during specific phases of flight
- describe the effects of meteorological conditions upon performance characteristics and correct appliance of these factors to a specific chart, table, graph, or other performance data compute the centre-of-gravity location for a specific load condition (as specified by the examiner), including adding, removing, or shifting weight
- select an appropriate route, altitude and alternate
- obtain and correctly interpret applicable NOTAM information;

- calculate the estimated time en-route and total fuel requirement based on factors such as power settings, operating altitude or flight level, wind and fuel reserve requirements
- determine the required performance for the planned flight being within the aircraft's capability and operating limitations
- retrieve and interpret items such as weather reports and forecasts; pilot and radar reports surface analysis charts; significant weather prognostics; winds and temperatures aloft; freezing level charts, NOTAMS and SIGMETs
- make a competent "GO/NO-GO" decision based on available information for the planned flight;
- complete a flight plan in a manner that reflects the conditions of the proposed flight;
- demonstrate sufficient practical operational knowledge of the regulatory requirements relating to instrument and visual flying, as applicable;
- retrieve and interpret items pertinent to the flight such as weather reports and forecasts; pilot and radar reports; surface analysis charts; significant weather prognostic charts; winds and temperature aloft; freezing level charts, NOTAMS and SIGMETs

3.2.3 Pre-Flight

Aim
Determine the candidate's ability to systematically complete internal and external checks in accordance with the POH/AFM and SOPs to ensure that the aeroplane is ready for the intended flight. The candidate will also demonstrate knowledge of how to deal with irregularities, if found.

Description
The pre-flight aeroplane inspection will include a visual inspection of the exterior and interior of the aeroplane, locating each required item and explaining the purpose of the inspection in accordance with the POH/AFM and SOPs. The candidate will carry out a visual check for fuel quantity, proper grade of fuel, fuel contamination and oil levels in accordance with the POH/AFM. If, due to aircraft design, the POH/AFM does not prescribe a visual check of fuel levels, the candidate will use fuel logs or other credible procedures to confirm the amount of fuel on board the aircraft. At the request of the examiner, the candidate will conduct an oral passenger safety briefing.

Performance Criteria
Base the assessment on the candidate's ability to:

- demonstrate an adequate knowledge of the pre-flight inspection procedures, while explaining briefly the purpose of inspecting the items, which must be checked, how to detect possible defects and the corrective action to take;
- demonstrate adequate knowledge of the operational status of the aeroplane by locating and explaining the significance and importance of related documents, such as airworthiness and registration certificates, operating limitations, handbooks, and manuals, minimum equipment list (MEL) (if appropriate), mass and balance data and maintenance requirements, tests, and appropriate records applicable to the proposed flight or operation; and maintenance that may be performed by the pilot or other designated crewmember;
- use the approved checklist to inspect the aeroplane externally and internally;
- verify the aeroplane is safe for flight by emphasizing the need to look at and explain the purpose of inspecting items, such as:
    a. power-plant, including controls and indicators
    b. fuel quantity, grade, type, contamination safeguards, and servicing procedures
    c. oil quantity, grade, and type
    d. hydraulic fluid quantity, grade, type, and servicing procedures
    e. oxygen quantity, pressures, servicing procedures, and associated systems and equipment for crew and passengers

f. fuselage, landing gear, float devices (where applicable), brakes, and steering system
g. tires for condition, inflation, and correct mounting, where applicable
h. fire protection/detection systems for proper operation, servicing, pressures, and discharge indications
i. pneumatic system pressures and servicing
j. ground environmental systems for proper servicing and operation
k. auxiliary power unit (APU) for servicing and operation (where applicable)
l. flight control systems including trim, spoilers, and leading/trailing edge
m. anti-ice, deice systems, ice warning systems, servicing, and operation
n. coordinate with ground crew and ensure adequate clearance prior to moving any devices, such as door, hatches and flight control surfaces;
o. comply with the provisions of the appropriate Operations Specifications, if applicable, as they pertain to the aeroplane type and operation;
p. demonstrate proper operation of all applicable aeroplane systems;
q. note any discrepancies, determine if the aeroplane is airworthy and safe for flight, or takes the proper corrective action with respect to unsatisfactory conditions identified; and
r. check the general area around the aeroplane for hazards to the safety of the aeroplane and personnel.

3.2.4 Engine Start

Aim
Determine the candidate's ability to complete the correct engine start procedures including the use of an auxiliary power unit (APU) or external power source under various atmospheric conditions, conducting warm-up, run-up and system checks, recognize normal and abnormal situations, and take proper action in the event of a malfunction.

Description
The candidate will demonstrate the proper use of the pre-start, start and pre-taxi check-lists and check the appropriate radio communications, navigation and electronic equipment and selection of the appropriate communications and navigation frequencies prior to flight.

Performance Criteria
Base the assessment on the candidate's ability to:

- ensure ground safety procedures are followed during the before-start, start, and after-start phases;
- ensure the appropriate use of ground crew personnel during the start procedures (where applicable);
- perform all items of the start procedures by systematically following the approved checklist items for the before-start, start, and after-start phases;
- demonstrate sound judgment and operating practices in those instances where specific instructions or checklist items are not published;
- coordinate with ground crew and ensures adequate clearance prior to moving any devices, such as door, hatches, and flight control surfaces;
- demonstrate adequate knowledge of the pre-take-off checks by stating the reason for checking the items outlined on the approved checklist and explaining how to detect possible malfunctions;
- divide attention properly inside and outside cockpit;
- ensure that all systems are within their normal operating range prior to beginning, during the performance of, and at the completion of those checks required by the approved checklist;
- explain, as may be requested by the examiner, any normal or abnormal system operating characteristic or limitation; and the corrective action for a specific malfunction;
- determine if the aeroplane is safe for the proposed flight or requires maintenance;

- determine the aeroplane's take-off performance, considering such factors as wind, density altitude, weight, temperature, pressure altitude, and runway condition and length;
- determine airspeeds/V-speeds and properly sets all instrument references, flight director and autopilot controls, and navigation and communications equipment;
- review procedures for emergency and abnormal situations, which may be encountered during take-off, and states the corrective action required of the Pilot-in-Command and other concerned crewmembers;
- perform an avionics and navigation equipment cockpit check; and
- obtain and correctly interpret the take-off and departure clearance as issued by ATC.

3.2.5 Taxi-Out

Aim
Determine the candidate's ability to manoeuvre the aeroplane safely on the ground.

Description
The candidate will taxi the aircraft to and from the runway in use and as otherwise required during the check. While taxiing, the candidate will follow taxiing procedures. In addition, the taxi check will include the use of the taxiing checklist, taxiing in compliance with clearances and instructions issued by the appropriate air traffic control unit or by the examiner.

Performance Criteria
Base the assessment on the candidate's ability to:
- demonstrate adequate knowledge of safe taxi procedures (as appropriate to the aeroplane including push-back or power-back, as may be applicable);
- demonstrate proficiency by maintaining correct aeroplane control;
- maintain proper spacing on other aircraft, obstructions, and persons;
- accomplish the applicable checklist items and perform recommended procedures;
- maintain desired track and speed;
- perform an instrument check;
- comply with instructions/clearances issued by ATC (or the examiner simulating ATC);
- observe runway hold lines, localizer and glide slope critical areas and other surface control markings and lighting;

3.3 Take-off, departure and cruise

3.3.1 Take-Off

Aim
Determine the candidate's ability to take-off safely using the correct technique and procedure for the actual wind conditions, runway surface and length, and can assess the possibility of further conditions such as wind shear and wake turbulence.

Description
The candidate will demonstrate a normal take-off performed in accordance with the AFM.

In case of an IR check flight the candidate will demonstrate an instrument take-off in the same manner as the normal take-off with simulated instrument conditions established at or after reaching an altitude of 200 feet above the airport elevation.
Performance Criteria

Base the assessment on the candidate's ability to:

- demonstrate adequate knowledge of normal and crosswind take-offs and climbs including airspeeds), configurations, and emergency/abnormal procedures (as appropriate to the aeroplane);
- note any surface conditions, obstructions, or other hazards that might hinder a safe take-off;
- verify and correctly apply correction for the existing wind component to the take-off performance;
- complete required checks prior to starting take-off to verify the expected power-plant performance;
- Perform all required pre-take-off checks as required by the appropriate checklist items;
- align the aeroplane on the runway centreline;
- apply the controls correctly to maintain longitudinal alignment on the centreline of the runway prior to initiating and during the take-off;
- adjust the power-plant controls as recommended by the POH/AFM or other approved guidance for the existing conditions;
- monitor power-plant controls, settings, and instruments during take-off to ensure all predetermined parameters are maintained;
- adjust the controls to attain the desired pitch attitude at the predetermined airspeed/V-speed to attain the desired performance for the take-off segment;
- perform the required pitch changes and, as appropriate, perform or call for and verifying the accomplishment of gear and flap retractions, power adjustments, and other required pilot-related activities at the required airspeed/V-speeds within the tolerances established in the POH or AFM;
- use the applicable noise abatement and wake turbulence avoidance procedures;
- accomplish or calls for and verifies the accomplishment of the appropriate checklist items;
- maintain the appropriate climb segment airspeed/V-speeds;
- maintain the desired heading and the desired airspeed/V-speed within given limits or the appropriate V-speed range;

<u>Performance Criteria Engine Failure after Take-Off (Multi-Engine)</u>

Base the assessment on the candidate's ability to:

- recognize the simulated engine failure promptly;
- control the aeroplane;
- set the power controls and reduce drag by using control application, in the proper sequence;
- identify and verify the inoperative engine;
- bank toward the operating engine, as recommended for best performance;
- maintain directional control within given limits;
- establish a positive rate of climb, if the aeroplane is capable;
- accelerate to and maintain one engine inoperative required airspeed/V-speeds and trim the aeroplane, as required;
- locate the necessary controls and switches to carry out and complete the emergency procedures in accordance with the approved emergency procedures checklist (engine failure during take-off):
    a. complete prescribed engine failure vital action checks from memory;
    b. complete the emergency drill, in accordance with the emergency checklist; and
    c. complete engine shutdown checks and other necessary checks in accordance with the appropriate emergency checklist(s).
- monitor the operating engine and take appropriate action to keep the operating engine parameters within limitations.

3.3.2 Rejected Take-Off

Aim
Determine the candidate's ability to recognize an abnormal situation requiring a rejected take-off and to carry out an appropriate procedure in accordance with the AFM/POH and/or SOPs.

Note: If there is no FSTD available a rejected take-off reasonable speed must be determined (e.g. 50% of VMCA) giving due consideration to aeroplane characteristics, runway length, surface conditions, wind direction, brake heat energy, and any other factors that might adversely affect safety.

Description
When performed in a simulator, the candidate will demonstrate a rejected take-off before reaching lift-off speed or, if conducted in the aircraft, the candidate will verbally explain this manoeuvre during the briefing or perform the procedure at a reasonable speed before reaching V1.

Reasonable in this context means: taking into consideration required accelerate-stop distance versus runway length available, wind conditions, runway surface conditions, heating effect on brakes, tire conditions, possible defects of antiskid systems and any other circumstances or conditions that may affect a safe accomplishment of the procedure.

Performance Criteria
Base the assessment on the candidate's ability to:

- demonstrate adequate knowledge of the technique and procedure for accomplishing a rejected take-off after power-plant/system(s) failure/warnings, including related safety factors;
- consider, prior to beginning the take-off, operational factors which could affect the manoeuvre, such as Take-off Warning Inhibit Systems or other aeroplane characteristics, runway length, surface conditions, wind, obstructions that could affect take-off performance and could adversely affect safety;
- align the aeroplane on the runway centreline;
- perform all required pre-take-off checks as required by the appropriate checklist items;
- adjust the power-plant controls as recommended for the existing conditions;
- apply the controls correctly to maintain longitudinal alignment on the centreline of the runway;
- abort the take-off if, in a single-engine aeroplane the powerplant failure occurs prior to becoming airborne, or in a multi-engine aeroplane, the powerplant failure occurs at reasonable speed before V1 during the take-off where the abort procedure can be initiated and the aeroplane can be safely stopped on the remaining runway/stop way. If a flight simulator is not used, the power-plant failure will be explained by the candidate prior to the flight;
- reduce the power smoothly and promptly, if appropriate to the aeroplane, when power-plant failure is recognized; and
- use spoilers, prop reverse, thrust reverse, wheel brakes, and other drag/braking devices, as appropriate, maintaining positive control in such a manner as to bring the aeroplane to a safe stop. Accomplishes the appropriate power-plant failure or other procedures and/or checklists as set forth in the POH or AFM or SOP.

3.3.3 Initial Climb / En-Route Climb

Aim
Determine the candidate's ability to comply with initial climb departure procedures and en-route departure procedures as cleared.

Description
The candidate will complete the initial climb procedures, the departure procedures and establish the aircraft on the en-route course as cleared in accordance with the Visual or Instrument Flight Rules, as applicable.

In addition, the candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Performance Criteria Initial Climb
Base the assessment on the candidate's ability to:

- transition smoothly and accurately from visual meteorological conditions to actual or simulated instrument meteorological conditions, where applicable;
- monitor power-plant controls, settings, and instruments during the initial climb to ensure all predetermined parameters are maintained;
- adjusts the controls to attain the desired pitch attitude at the predetermined airspeed/V-speed to attain the desired performance for the take-off and climb segment;
- perform the required pitch changes and, as appropriate, performs or calls for and verifies the accomplishment of, gear and flap retractions, power adjustments, and other required pilot-related activities at the required airspeed/V-speeds within the tolerances established in the POH or AFM and SOPs;
- use the applicable noise abatement and wake turbulence avoidance procedures, as required;
- accomplish or call for and verify the accomplishment of the appropriate checklist items;
- maintain the desired heading and the desired airspeed/V-speed within given limits or the appropriate V-speed range; and
- comply with ATC clearances and instructions issued by ATC (or the examiner simulating ATC).

Performance Criteria En-route Climb
Base the assessment on the candidate's ability to:

- establish communications with ATC, using proper phraseology;
- select, identify and use the appropriate communications and navigation systems associated with the proposed departure phase;
- perform the aircraft checklist items relative to the phase of flight;
- intercept, in a timely manner, all tracks, radials and bearings appropriate to the procedure, route or clearance;
- adhere to departure, noise abatement and transition procedures or ATC instructions;
- comply, in a timely manner, with all instructions and airspace restrictions;
- maintain proper aircraft control and flight within operating configurations and limitations;
- maintain assigned headings within given limits;
- maintain assigned tracks and bearings within given limits;
- maintain altitude within given limits;
- exhibit adequate knowledge of two-way radio communications failure procedures; and
- conduct the departure phase to a point where, in the opinion of the examiner, the transition to the en-route environment is complete.

3.3.4 Cruise

Aim
Determine the candidate's ability to establish the aeroplane in cruising flight at the pre-planned power settings in accordance with the POH/AFM and to determine the candidate's ability to comply with en-route procedures as cleared.

Description
The candidate will establish the aeroplane in cruising flight in accordance with the performance charts in the POH/AFM, placards displayed in the aeroplane or any other means authorized by the manufacturer. In addition, the candidate will maintain the aircraft on the en-route course and comply with en-route procedures, as cleared, in accordance with Visual or Instrument Flight Rules, as applicable. The candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Performance Criteria
Base the assessment on the candidate's ability to:
- select and use the appropriate communications frequencies;
- select and identify the navigation aids associated with the proposed en-route phase;
- perform the aircraft checklist items relative to the phase of flight;
- intercept, in a timely manner, all tracks, radials and bearings appropriate to the route or clearance;
- maintain proper aircraft control and flight within operating limitations;
- maintain assigned heading, tracks or bearings within given limits;
- set the power/throttle(s), propeller and mixture controls at the pre-planned power setting, as recommended by the POH/AFM;
- synchronize propellers;
- apply any additional measures recommended by the manufacturer with respect to aircraft configuration or other considerations; and
- confirm cruise performance and demonstrate good decision-making to deal with the consequences of variances from the expected performance (ETA revision, fuel management).

3.4 General Airwork

3.4.1 Steep Turns

Aim
Determine the candidate's ability to perform level and coordinated steep turns.

Description
At an operationally safe altitude recommended by the manufacturer, training syllabus, or other training directive, but in no case lower than 3,000 feet AGL, the candidate will execute at least one steep turn in each direction with a bank angle of 45° and a change in heading of 360°. The candidate will specify the selected altitude, airspeed and initial heading before entering the turn.

Performance Criteria
Base the assessment on the candidate's ability to:
- where applicable, divide attention appropriately between outside visual references and instrument indications;
- roll into and out of turns, using smooth and coordinated pitch, bank and power control to maintain the specified altitude within given limits;
- establish the recommended entry airspeed;

- maintain the bank angle of 45º within ±10º while in smooth stabilized flight; and reverse the direction of turn and repeat the manoeuvre in the opposite direction;
- roll out of the turn at the reversal heading and the entry heading within ±10º; and
- avoid any indication of an approaching stall, abnormal flight attitude, or exceeding any structural or operating limitation during any part of the manoeuvre.

3.4.2 Stalls

Aim
Determine the candidate's ability to recognize and recover smoothly and correctly from an approach to a stall in various configurations with a minimum loss of altitude.

Description
For the purpose of this manoeuvre, the required approach to a stall speed is the speed at which there is a perceptible buffet or other response/warning to the initial stall entry. When performed in an aeroplane, conduct the approach to stall at an altitude of at least 3,000 feet AGL. Perform one of the approaches to stall while in a turn with a bank angle of between 15° and 30°.

Performance Criteria
Base the assessment on the candidate's ability to:

- select an entry altitude that is in accordance with the AFM/POH or SOPs, but in no case lower than an altitude that will allow recovery to be safely completed at a minimum of 3,000 feet AGL. When accomplished in an FSTD, the entry altitude may be at low, intermediate, or high altitude as appropriate for the aeroplane and the configuration, at the discretion of the examiner;
- observe the area is clear of other aircraft prior to accomplishing an approach to a stall;
- establish the specified configuration;
- while maintaining altitude, slowly establishes the pitch attitude (when approaching the stalling speed avoid using trim), bank angle, and power setting that will induce stall at the desired target airspeed;
- announce the first indication of an impending stall (such as buffeting, stick shaker, decay of control effectiveness, and any other cues related to the specific aeroplane design characteristics) and initiates recovery as briefed before the flight and according AFM/POH;
- avoid entering a full stall (unless this is the scope of the exercise);
- promptly recover to a reference airspeed, altitude and heading, allowing only the acceptable altitude or airspeed loss, and heading deviation;
- retract flaps as recommended; and retract the landing gear after a positive rate of climb is established, or as recommended by the manufacturer;
- demonstrate smooth, positive control during entry, approach to a stall, and recovery; and
- return to the altitude, heading and airspeed specified by the examiner.

3.5 Holding, Approach, Landing and G/A Procedures

3.5.1 Holding

Aim
Determine the candidate's ability to establish the aircraft in a holding pattern using an actual or simulated ATC clearance.

Description
In actual or simulated instrument conditions, the candidate must demonstrate adequate knowledge of a holding procedure for a standard or non-standard, published or non-published holding pattern. If appropriate, the candidate must demonstrate adequate knowledge of holding endurance, including, but not necessarily limited to, fuel on board, fuel flow while holding, fuel required to alternate, etc. Based on an actual or simulated clearance, the candidate will select a suitable entry procedure, enter the hold and establish the aircraft in the holding pattern. Also, the candidate will demonstrate the proper programming and use of Flight Management Systems if applicable.

Performance Criteria
Base the assessment on the candidate's ability to:

- change to the recommended holding airspeed appropriate for the aeroplane and holding altitude, to cross the holding fix at or below maximum holding airspeed;
- recognize arrival at the clearance limit or holding fix and initiate entry into the holding pattern;
- follow appropriate entry procedures for a standard, nonstandard, published, or non-published holding pattern;
- report entering the hold;
- comply with ATC reporting requirements;
- use the proper timing criteria required by the holding altitude and ATC or examiner's instructions;
- comply with the holding pattern leg length when a DME distance is specified;
- use the proper wind-drift correction techniques to accurately maintain the desired radial, track, courses, or bearing;
- maintain the appropriate holding speed, headings/tracks/course within given limits, as applicable and accurately tracks radials, courses, and bearings; and
- maintain proper aircraft control and flight within operating configurations and limitations while in the hold.

3.5.2 Descent

Aim
Determine the candidate's ability to comply with visual or instrument arrival procedures, as applicable.

Description
Descent begins when the crew departs the cruise altitude for the purpose of an approach at a particular destination and ends when the crew initiates changes in aircraft configuration and/or speeds to facilitate a landing on a particular runway.

The candidate will complete the arrival procedures, as cleared, in accordance with Instrument Flight Rules or Visual Flight Rules, as applicable. In addition, the candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Performance Criteria
Base the assessment on the candidate's ability to:

- demonstrate adequate knowledge of en-route Low and High Altitude Charts, STAR's/FMS Procedures, Instrument Approach Procedure Charts, VFR Charts, as applicable, and related pilot and controller responsibilities;
- select and identify the navigation aids associated with the proposed arrival phase;
- select and correctly identify all instrument references, flight director and autopilot controls, and navigation and communications equipment associated with the arrival;
- perform the aircraft checklist items appropriate to the arrival;
- select and establish communications with ATC, using proper phraseology;
- comply, in a timely manner, with all ATC clearances, instructions, and restrictions;
- demonstrate adequate knowledge of two-way communications failure procedures;
- intercept, in a timely manner, all tracks, radials and bearings appropriate to the procedure, route, ATC clearance, or as directed by the examiner;
- correctly adhere to visual or instrument arrival procedures;
- adhere to airspeed restrictions and adjustments required by regulations, ATC, the POH/AFM, SOP's or the examiner;
- establish, where appropriate, a rate of descent consistent with the aeroplane operating characteristics and safety;
- maintain the appropriate airspeed, heading, altitude and accurately tracks, radials, courses, and bearings as given and prescribed;
- complies with the provisions of the Profile Descent, STAR, and other arrival procedures, as appropriate; and
- maintain proper aircraft control and flight within operating limitations.

3.5.3 Approach General

Aim
Determine the ability of the candidate to fly a successful stabilized precision and non-precision instrument approach in accordance with the published instrument approach procedure.
Stabilized as defined in ICAO Doc 8168 means:

i. At Vapp
ii. Correct final approach configuration as briefed/planned
iii. On track and glide-path
iv. Aircraft trimmed for approach speed
v. Correct/sufficient power setting for the final approach
vi. All checklists and the briefing completed

Description
The candidate will demonstrate approaches performed in accordance with procedures and limitations according AFM/POH or SOPs of the training syllabus of the ATO or the operator for the approach facility used. For multi-engine aeroplanes complete at least one approach with a simulated failure of one engine.

The simulated engine failure shall occur before initiating the final approach segment and must continue to touchdown or throughout the missed approach procedure.

The candidates will demonstrate the proper programming and use of Flight Management Systems as applicable.

The minimum altitudes depicted on the approach chart represent hard approach floor heights above terrain or other obstacles determined during the approach design process. Descent below these altitudes compromises the approach design safety factor.

Non Precision Instrument Approach (2D) - Performance Criteria

Base the assessment on the candidate's ability to:

- select and comply with the PBN, VOR, LOC or NDB instrument approach procedure to be performed;
- establish two-way communications with ATC using the proper communications phraseology and techniques;
- comply in a timely manner, with all clearances, instructions, and procedures issued by ATC and advise accordingly if unable to comply;
- select, tune, identify, confirm and monitor the operational status of ground and aircraft navigation equipment to be used for the approach procedure;
- establish the appropriate aircraft configuration and airspeed/V-speed considering turbulence, wind shear, microburst conditions, or other meteorological and operating conditions;
- complete the aircraft check list items appropriate to the phase of flight or approach segment, including engine out approach and landing checklist, as appropriate;
- prior to final approach course, maintain declared altitudes in given limits without descending below applicable minimum altitudes, and maintain tracks as given;
- apply necessary adjustment to the published Decision Altitude/Height (DA/H) or Minimum Descent Altitude/Height (MDA/H) and visibility criteria for the aeroplane approach category when required, such as for performance considerations, NOTAMS, inoperative aeroplane/ ground navigation equipment or inoperative visual aids associated with the landing environment;
- on the intermediate and final segments of the final approach course:
    a. maintain PBN/ VOR/ LOC tracking within ½ scale deflection of the course deviation indicator or within 5 degrees of the desired track in the case of an NDB approach;
    b. fly the approach in a stabilized manner without descending below the applicable minimum altitudes depicted on the approach chart (+as required/–0 feet);
    c. in the case of a CDFA approach, achieve a stable descent complying with the published altitude/distance profile;
    d. in the case of a non-CDFA approach, descend to and accurately maintain the briefed Minimum Decision Altitude/Height (MDA/H) whilst tracking to the Missed Approach Point (MAP);
    e. maintain declared approach airspeeds (+10/-5 knots);
    f. initiate the missed approach procedure, if the required visual references for the intended runway are not obtained at the MAP or DA/H;
    g. execute a normal landing from a straight-in or circling approach if the required visual references are achieved.

Precision Instrument Approach (3D) - Performance Criteria

Base the assessment on the candidate's ability to:

- select and comply with the ILS or LPV instrument approach procedure to be performed;
- establish two-way communications with ATC using the proper communications phraseology and techniques, either personally, or, if appropriate, directs co-pilot/safety pilot to do so, as required for the phase of flight or approach segment;
- comply in a timely manner, with all clearances, instructions, and procedures issued by ATC and advise accordingly if unable to comply;
- select, tune, identify and confirm the operational status of ground and aircraft navigation equipment to be used for the approach procedure;
- establish the appropriate aircraft configuration and airspeed/V-speed considering turbulence, wind shear or other meteorological and operating conditions;

- complete the aircraft check list items appropriate to the phase of flight or approach segment, including engine out approach and landing checklist, as appropriate;
- prior to final approach course, maintain declared or assigned altitudes within given limits without descending below applicable minimum altitudes and maintain headings within given limits;
- apply necessary adjustment to the published Decision Height (DH) and visibility criteria for the aeroplane approach category when required, such as NOTAMS, inoperative aeroplane and ground navigation equipment, inoperative visual aids associated with the landing environment;
- on final approach course, allow no more than ½ scale deflection of the localizer and/or glideslope indications;
- maintain declared approach airspeeds within given limits;
- maintain a stabilized descent to the Decision Height (DH) to permit completion of the visual portion of the approach and landing with minimal manoeuvring; and
- initiate the missed approach procedure, upon reaching the DH, when the required visual references for the intended runway are not obtained.

Circling Approach - Performance Criteria

Base the assessment on the candidate's ability to:

- demonstrate adequate knowledge of circling approach categories, speeds, and complies with procedures to a specified runway;
- in simulated or actual instrument conditions to MDA, accomplish the circling approach selected by the examiner;
- demonstrate sound judgment and knowledge of the aeroplane manoeuvring capabilities
- throughout the circling approach;
- adheres to all restrictions and instructions issued by ATC;
- descend at a rate that ensures arrival at the MDA at, or prior to, a point from which a normal circle-to-land manoeuvre can be accomplished;
- avoids descent below the appropriate circling MDA until in a position from which a descent to a normal landing can be made;
- manoeuvre the aeroplane, after reaching the authorized circling approach altitude, by visual references to maintain a flight path that permits a normal landing on a runway at least 90° from the final approach course;
- perform the procedure without excessive manoeuvring and without exceeding the normal operating limits of the aeroplane;
- maintain the desired altitude within -0, +100 feet, heading/track and the airspeed within given limits, but not less than the airspeed as specified in the POH or the AFM;
- use the appropriate aeroplane configuration for normal and abnormal situations and procedures, where applicable;
- turn in the appropriate direction, when a missed approach is dictated during the circling approach and uses the correct procedure and aeroplane configuration (the missed approach procedure must be briefed in detail before starting the approach!); and
- perform all procedures required for the circling approach and aeroplane control in a smooth, positive, and timely manner.

3.5.4 Go-Around

Aim
Determine the candidate's ability to carry out a successful missed approach.

Description
Following an instrument approach, the candidate will conduct a missed approach at any time from intercepting final approach to touch down on the runway. Except where ATC amends it, the candidate must follow the published missed approach profile.

In addition, the candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Performance Criteria
Base the assessment on the candidate's ability to:

- demonstrate adequate knowledge of missed approach procedures associated with standard instrument approaches;
- initiate the missed approach procedure promptly by the timely application of power, establish the proper climb attitude, and reduces drag in accordance with the approved procedures, assures a positive climb;
- report to beginning the missed approach procedure;
- comply with the published or alternate missed approach procedure;
- follow the recommended aeroplane check list items appropriate to the go-around procedure;
- request a clearance, if appropriate, to the alternate airport, another approach, a holding fix, clearance limit, or as directed by the examiner; and
- maintain recommended airspeeds, heading, track or bearing within given limits; and
- climb to and maintain the published missed approach altitude, or as cleared by ATC or the examiner.

3.5.5 Baulked Landing 50 Feet

Aim
Determine the candidate's ability to carry out a successful rejected landing.

Description
The candidate will conduct a baulked landing after having completed the instrument portion of the approach with the runway in sight, the aircraft configured for landing and in final descent to the runway. Initiate this manoeuvre at approximately 50 feet above the runway and just about over the runway threshold. The examiner may combine the baulked landing with the missed approach.
In addition, the candidate will demonstrate the proper programming and use of Flight Management Systems, as applicable.

Performance Criteria
Base the assessment on the candidate's ability to:

- demonstrate adequate knowledge of a baulked landing procedure including the conditions that dictate a baulked landing, the importance of a timely decision, the recommended airspeed, and the applicable "clean-up" procedure;
- make a timely decision to reject the landing for actual or simulated circumstances and make appropriate notification when safety-of-flight is not an issue;
- apply the appropriate power setting for the flight condition and establish a pitch attitude necessary to obtain the desired performance/positive climb;

- retract the wing flaps/drag devices and landing gear, if appropriate, in the correct sequence and at a safe altitude, establishes a positive rate of climb and the appropriate airspeed within +10/-5 knots;
- trims the aeroplane as necessary, and maintain the proper ground track during the rejected landing procedure; and
- accomplish the appropriate checklist items in a timely manner in accordance with approved procedures.

3.5.6 Landing

Aim
Determine the candidate's ability to carry out a normal or crosswind landing.

Description
The candidate will demonstrate (depending on the check profile):
- one normal landing which, where practical, be conducted without external or internal glideslope information;
- one landing from an instrument approach;
- one crosswind landing, where practicable, under existing meteorological, runway and airport traffic conditions;
- one landing under simulated circling approach conditions except where prevailing conditions prevent a landing, an approach to a point where a landing could have been made.

Performance Criteria
Base the assessment on the candidate's ability to:
- demonstrate adequate knowledge of normal and crosswind approaches and landings including recommended approach angles, airspeeds, V-speeds, configurations, performance limitations, and ATC or examiner instructions;
- consider factors to be applied to the approach and landing such as displaced thresholds, meteorological conditions, NOTAMs, wake turbulence, wind shear, microburst, gust/wind factors, visibility, runway surface, braking conditions, and other related safety factors (as appropriate to the aeroplane);
- establish the approach and landing configuration appropriate for the runway and meteorological conditions, and performs proper power adjustments;
- perform the aircraft checklist items relative to the phase of flight;
- maintains a ground track that ensures the desired traffic pattern will be flown, considering any obstructions and ATC or examiner instructions;
- verify existing wind conditions, makes proper correction for drift, and maintains a precise ground track;
- maintain a stabilized approach and the desired airspeed within +10/-5 knots.
- execute a landing from an approach MDA or DA when the required visual references for the intended runway are obtained;
- accomplish a smooth, positively controlled transition from final approach to touchdown or to a point in the opinion of the examiner that a safe full stop landing could be made;
- maintain positive directional control and crosswind correction during the after-landing roll and strictly maintain the runway centreline;
- use spoilers, prop reverse, thrust reverse, wheel brakes, and other drag/braking devices, as appropriate, in such a manner to bring the aeroplane to a safe stop;
- leave the runway on taxiway/intersection as mentioned during the approach briefing or as instructed by ATC or the examiner; and
- complete the applicable after-landing checklist items in a timely manner and as recommended by the manufacturer.

3.5.7 Taxi In – Block On

Aim
Determine the candidate's ability to conduct after landing taxi in, arrival/engine shutdown, post-flight and flight close procedures as appropriate.

Description
The candidate will demonstrate the ability to manoeuvre the aircraft under its own power to an arrival area for parking, shut down the engine(s) and ancillary systems and conduct required post flight procedures such as securing the aircraft.

Performance Criteria
Base the assessment on the candidate's ability to:

- demonstrate proficiency by maintaining correct and positive control;
- consider the safety of nearby persons or property by maintaining proper look-out, spacing between aircraft and obstructions;
- accomplish the applicable checklist items and performs the recommended procedures;
- maintain an appropriate taxi speed;
- comply with instructions issued by ATC (or the examiner simulating ATC);
- observe runway hold lines, localizer and glide slope critical areas, and other surface control markings and lighting to prevent a runway incursion;
- maintain constant vigilance and aeroplane control during the taxi operation; and
- record forms/logs and flight time/discrepancies.

3.5.8 Pilot Duties

Aim
Determine the candidate's ability to demonstrate proper duties in accordance with the aircraft procedures and SOP's.

Description
Each pilot will demonstrate PF duties sufficient to determine compliance with and knowledge of aircraft procedures and company SOPs. This will include normal and abnormal procedures.

Performance Criteria
Base the assessment on the candidate's ability to:

- adhere to pilot duties as outlined in the aircraft procedures and company SOP's;
- complete necessary duties assigned by the pilot flying;
- maintain crew discipline during normal and abnormal procedures;
- demonstrate familiarity with the procedures contained in the QRH or paper checklist;
- demonstrate FMS inputs, as applicable;
- effectively share cockpit workload; and
- maintain crew awareness or attention to flight mode annunciations.

3.6 Abnormal and Emergency Procedures (as applicable)

3.6.1 Abnormal/Emergencies

Aim
Determine the candidate's ability to complete recommended checks and procedures in accordance with the POH, AFM, or other applicable publications in event of system malfunctions or other emergencies.

Description
System malfunctions will consist of a selection adequate to determine that the pilot has satisfactory knowledge and ability to safely handle malfunctions. The candidate will be required to demonstrate the use of as many simulated abnormal and emergency procedures as is necessary to confirm that the pilot has an adequate knowledge and ability to perform these procedures.

Performance Criteria
Base the assessment on the candidate's ability to:

- demonstrate adequate knowledge of the emergency procedures appropriate to the approved AFM (as may be determined and briefed before the flight by the examiner) relating to the aeroplane type;
- identify the malfunctions;
- review causal factors, identify possible alternate course of action;
- apply correct checks and procedures in accordance with the POH/AFM, or other approved publication;
- consider and apply any restrictions or limitations to the operation of a system(s) and procedures in order to continue the flight;
- demonstrate knowledge and ability in the use of the electronic checklist and alerting system, as applicable; and
- develop a reasonable course of action for the remainder of the flight including a risk assessment (e.g.: FORDEC – Facts-Options-Risks-Decision-Execution-Check)

3.6.2 Engine Failure

Aim
Determine the candidate's ability to maintain control of the aircraft and carry out the appropriate engine failure procedures in accordance with the POH/AFM and/or SOPs.

Description
The pilot will demonstrate the ability to maintain control and safely handle malfunctions on simulated engine failures any time during the check.

Performance Criteria
Base the assessment on the candidate's ability to:

- recognize an engine failure or the need to shut down an engine as simulated by the examiner;
- complete engine failure vital action checks from memory;
- establish a bank of approximately 5°, if required, or as recommended by the manufacturer, to maintain coordinated flight, and properly trim for that condition;
- set engine controls, reduce drag as necessary, correctly identify and verify the inoperative engine after the failure (or simulated failure);
- maintain the operating engine within acceptable operating limits;
- establish the best engine inoperative airspeed as appropriate to the aircraft and condition of flight;
- establish and maintain the recommended flight attitude and configuration for the best performance for all manoeuvring necessary for the phase of flight;

- follow the prescribed aeroplane checklist, and verify the procedures for securing the inoperative engine;
- determine the cause for the engine failure and if a restart is a viable option;
- maintain desired altitude within given limits, when a constant altitude is specified and is within the capability of the aeroplane;
- maintain the desired airspeed and heading within given limits;
- demonstrate proper engine restart or shutdown procedures (whatever appropriate) in accordance approved procedure/checklist or the manufacturer's recommended procedures and pertinent checklist items; and monitor all functions of the operating engine and make necessary adjustments.

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Chapter 4 – LAPL and Private Pilot Licence (Aeroplane) – LAPL/PPL (A)

The following comments and information are offered to assist the examiner to conduct a thorough flight test. These suggestions will support in making accurate assessments of the applicant's skills and knowledge.

All items of the skill test shall be performed utilising the flight test standards of Chapter 3 and flight test tolerances depicted on the skill test form.

4.1 Foreword

Every item of every section is to be assessed by the flight examiner - FE.

Some items must be assessed through a dedicated exercise, for instance, item 2.g. requires air work. Other items are assessed without setting a particular drill:

1. It can be assessed through normal situations of the flight. For instance, items 2.c. (climbing turns and levelling off) have a chance to be observed within the very first minutes of the flight.
2. It is assessed through the whole flight, or parts of it. For instance, items 2.a or 3.h (ATC liaison) or item 3.b maintaining altitude, heading and speed.

4.2 Aeroplane

Quick Reference: Part-FCL reference	FCL.125 // FCL.235 // FCL.1015
Who can test:	Flight Examiner (FE), if they are individually authorised for this role. When an attempt is taken as two flights both parts are to be conducted by the same examiner.

4.3 General

The route to be flown for the skill test shall be chosen by the FE.

The applicant shall be responsible for the flight planning and shall ensure that all equipment and documentation for the execution of the flight are on board. The navigation section of the test shall have a duration of at least 30 minutes which allows the pilot to demonstrate his ability to complete a route with at least two identified waypoints for the LAPL (A) and three waypoints for the PPL (A). These waypoints shall be agreed between applicant and examiner.

An applicant shall indicate to the FE the checks and duties carried out, including the identification of radio facilities. Checks shall be completed in accordance with the flight manual or the authorised checklist for the aeroplane or TMG on which the test is being taken. During pre-flight preparation for the test the applicant shall be required to determine power settings and speeds. Performance data for take-off, approach and landing shall be calculated by the applicant in compliance with the operations manual or flight manual for the aeroplane used.

GM1 FCL.1015 requires the duration of the flight to be at least 90 minutes.

4.4 Check of theoretical knowledge

Ensure that questions asked are in relation to the type of aircraft being used for the flight test.

Civil Aviation Directorate,Transport Malta, Pantar Road, Ħal Lija LJA 9023 Malta. Tel:+356 2555 5665 Fax:+356 2555 5634 cadpel.tm@transport.gov.mt www.transport.gov.mt

Chapter 5 – Commercial Pilot Licence – CPL (A)

The following comments and information are offered to assist the examiner to conduct a thorough flight test. These suggestions will support in making accurate assessments of the applicant's skills and knowledge.

All items of the skill test shall be performed utilising the flight test standards of Chapter 3 and flight test tolerances depicted on the skill test form.

5.1 Aeroplane

Part-FCL reference	Appendix 4 to Part-FCL
Who can test:	Flight Examiner (FE), if they are individually authorised for this role. When an attempt is taken as two flights both parts are to be conducted by the same examiner.

5.2 General

The skill test and proficiency check will be performed according Appendix 4 to Part-FCL.

In situations where the examiner does not occupy a pilot seat, he/she is responsible for briefing the safety pilot (Pilot-in-Command) on his duties throughout the test flight.

Applicants will be assessed on all aspects of the aeroplane operation. Sound basic and handling skills are essential as well as airmanship, navigation, instrument flying, correct RT phraseology, cockpit and overall flight management. The examiner may elect to evaluate certain aspects by asking questions.

The CPL skill test form is divided into six sections:

Section 1 - Pre-flight operations and departure
Section 2 - General air work
Section 3 - En-route procedures
Section 4 - Approach and landing procedures
Section 5 - Abnormal and emergency procedures
Section 6 - Simulated asymmetric flight and relevant class/type items

All relevant sections of the skill test shall be completed within 6 months. Failure to achieve a pass in all relevant sections of the test in two attempts will require further training. The sequence of sections may vary depending on circumstances and the examiner's briefing will include the expected profile.
GM1 FCL.1015 requires the duration of the flight to be at least 90 minutes.

The route to be flown shall be chosen by the FE and the destination shall be a controlled aerodrome. The applicant shall be responsible for the flight planning and shall ensure that all equipment and documentation for the execution of the flight are on board.

Items in section 2 (c) and (e) (iv), and the whole of sections 5 and 6 may be performed in an FSTD. The FSTD must be approved for the purpose and must be of the same aeroplane type/class as used for the remainder of the skill test.

Use of the aeroplane checklists, airmanship, control of the aeroplane by external visual reference, anti-icing / de-icing procedures and principles of threat and error management apply in all sections.
The FE shall take no part in the operation of the aircraft except where intervention is necessary in the interests of safety or to avoid unacceptable delay to other traffic.

Civil Aviation Directorate, Transport Malta, Pantar Road, Ħal Lija LJA 9023 Malta. Tel:+356 2555 5665 Fax:+356 2555 5634 cadpel.tm@transport.gov.mt www.transport.gov.mt

The CPL Skill Test is very demanding. It is acknowledged that even the most 'professional' or 'talented' pilots can make mistakes. This does not necessarily result in a “fail”.

5.3 Conduct of CPL Skill Test

General

Transits to and from Sicily will be required so that the En-route section may be completed over land. These transits can be used to complete other sections of the test.

Section 1 – Departure

Performance planning must be carried out in accordance with the ATO Operations Manual. It is expected that the Operations Manual will require planning in accordance with EASA PART-OPS as the CPL course is designed to train pilots for commercial air transport.

Section 2 – Airwork

Both visual and instrument air work can be completed during the transits to and from Sicily, once clear of the immediate vicinity of Luqa. By judicious use of lookout turns etc, a general movement towards one’s destination can be achieved. It is assumed that visual straight & level, climbing, descending and medium turning will be assessed during the entire flight rather than as separate air work items, although a VX climb may be used to help satisfy the slow flight requirement. During the air work, the examiner will be responsible for ATC liaison and navigation. Instrument air work shall be carried out with the applicant wearing TM-CAD approved foggles or hood. During limited panel work the PFD, if fitted, shall be covered with a TM-CAD approved screen rather than just dimmed. If the aircraft is not fitted with a turn coordinator/turn needle, then use of a standby AI is acceptable.

Section 3 – En-route

The visual navigation legs of the En-route Section must be flown over Sicily. The transit to Sicily shall be ‘all aids’ and the coast-in point can be set up as a GPS waypoint. Around 20 miles from Sicily any air work shall be terminated and the applicant briefed on his present position. He shall then fly to the coast-in point. Once it is visually identified, all navigation aids shall be disabled by de-tuning (VOR, DME, and ADF) or by blanking the MFD (winding the range out to 300nm or setting the traffic page is quite effective). Wind information shall be removed from the PFD if possible. The first leg shall be around 20 minutes duration and the applicant shall use a recognised method of navigation. At or before reaching the first waypoint the applicant shall be given a diversion destination. This destination shall be a geographical feature around 20 minutes distant. There shall be at least 30° between inbound and outbound tracks. On the diversion leg the applicant may use terrestrial radio aids to assist his navigation, but not processed GPS information. If the applicant has successfully reached the first waypoint, the diversion leg can be curtailed once it is apparent that the applicant is highly likely to reach the diversion destination. Section 3 also includes fixing and tracking using terrestrial radio aids while in instrument flight (wearing foggles or a hood); if no suitable aid is available to track, then a GPS ‘direct to’ may be substituted if the MFD remains hidden. These items are best carried out during the transits at the same time as the instrument air work.

Section 4 – Approach and Landing

This section shall, whenever possible be carried out at an airfield other than Luqa, such as Comiso. The arrival can be started directly from the end of the en-route diversion or after part of the air work. Before handing responsibility for ATC liaison and navigation to the applicant, the examiner shall brief him on current position and ATC service received. One approach, usually the asymmetric landing, shall be ‘saved’ for the

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final arrival at Luqa. However, unless the applicant's performance during the arrival at Comiso left doubt in the examiner's mind, the arrival procedure at Luqa should not form part of the assessment. Resetting the engine to 'failed' during the arrival at Luqa is the examiner's responsibility and no emergency drills are required from the applicant. Examiners may need to use their judgement when considering whether ATC instructions are 'reasonable'. If they consider that the instructions are outside of normal aviation practice, then they may need to assist the applicant without penalty to him. Examiners shall confirm touch-and-go procedures with the applicant before departure. Touch-and-goes are not an assessed item and so, if the applicant does not wish to do them or requires that the examiner raises the flap and re-trims when on the runway, then his wishes shall be respected.

Section 5 – Abnormal Procedures

On a SE aeroplane, this section requires a system failure. On an ME aeroplane, this section requires a fire and a system failure. The fire can be usefully combined with the actual engine shutdown required in Section 6. However, airmanship/TEM considerations must be adhered to: the shutdown shall be carried out at a safe height (3000ft agl/amsl or as required by the ATO Operations Manual) and within sensible range of an airfield with suitable weather conditions; on an aeroplane with air-cooled, turbocharged engines, there shall be a cooling period at low power before shutdown and after restart. The examiner will need to brief the required procedures before flight. System failures will be touch drills but the applicant shall be expected to carry out the appropriate airmanship/TEM actions by making in-cockpit radio calls and changing track if necessary. System failure drills are not 'memory items'. Circuit breakers shall not be pulled to simulate emergencies.

Section 6 – Asymmetric and Class Rating

The EFATO, asymmetric go around and asymmetric landing shall be combined with Section 4. The engine restart shall be accomplished by the applicant using the checklist. Use of aircraft systems is required for the issue of a class rating. The autopilot, if fitted, must be used at some point. The only times acceptable for autopilot use are: during the transit to/from Sicily (except when air work and fixing/tracking is carried out), airfield arrival (Comiso and Luqa), during the system failure (unless the simulated failure is such that autopilot use would be inadvisable). Full use of the GPS (with a current database) is allowed for all the flight except Section 3; applicants shall, at least, be familiar with the 'Direct-to' function and be capable of transferring navigational information to the HSI. If the aircraft is fitted with anti-icing equipment, then the applicant shall be familiar with its use. The rejected take-off may be best done immediately after the final landing, given the length of the Luqa runways, but examiners will have to use their judgement as to when is the best time for this manoeuvre. The rejected take-off shall be initiated by the examiner saying "stop" or by simulating some form of warning or caution. Applicants must be briefed to use the full length of the runway remaining when stopping.

5.4 When proficiency is not reached

Repeat Items

Repeats are at the examiner's discretion but shall be used sparingly on a skill test, and only when some external factor is judged to have affected the applicant's performance.

Partial Pass

An applicant gaining a partial pass will be required to retake the failed section. He/she will be expected to put the aeroplane in a position from which this section can be carried out. Once the failed section has been flown, the test is complete; however, if the applicant elects to fly the aeroplane back to Luqa, then he/she will be assessed.

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Chapter 6 – Instrument Rating – IR (Aeroplane)

The following comments and information are offered to assist the examiner to conduct a thorough flight test. These suggestions will support in making accurate assessments of the applicant's skills and knowledge.

All items of the skill test shall be performed utilising the flight test standards of Chapter 3 and flight test tolerances depicted on the skill test form.

6.1 Aeroplane

Part-FCL reference	Appendix 7 to Part-FCL
Who can test:	IRE (an IRE or suitably qualified CRE may conduct the IR revalidation or renewal proficiency check)

6.2 General

The skill test and proficiency check will be performed according Appendix 7 to Part-FCL.

The skill test form is divided into six sections:

Section 1 - Pre-flight operations and departure
Section 2 - General handling
Section 3 - En-route IFR procedures
Section 4 - Precision approach procedures
Section 5 - Non- precision approach procedures
Section 6 - Flight with one engine inoperative

An applicant for an IR shall have received instruction on the same class or type of aircraft to be used in the test.

An applicant shall pass all the relevant sections of the skill test. If any item in a section is failed, that section is failed. Failure in more than one section will require the applicant to take the entire test again. An applicant failing only one section shall only repeat the failed section.

The test is intended to simulate a practical flight. The route to be flown shall be chosen by the examiner. An essential element is the ability of the applicant to plan and conduct the flight from routine briefing material. The applicant shall undertake the flight planning and shall ensure that all equipment and documentation for the execution of the flight are on board.

The duration of the flight shall be at least 1hour.

At the discretion of the examiner, any manoeuvre or procedure of the test may be repeated once by the applicant. The examiner may stop the test at any stage if it is considered that the applicant's demonstration of flying skill requires a complete retest.

An applicant shall fly the aircraft from a seat where the PIC functions can be performed and must carry out the test as if there was no other crew member. The examiner shall take no part in the operation of the aircraft, except when intervention is necessary in the interests of safety or to avoid unacceptable delay to other traffic.

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An applicant for an IR shall indicate to the examiner the checks and duties carried out, including the identification of radio facilities. Checks shall be completed in accordance with the authorised checklist for the aircraft on which the test is being taken. During pre-flight preparation for the test the applicant is required to determine power settings and speeds.

Performance data for take-off, approach and landing shall be calculated by the applicant in compliance with the operations manual or flight manual for the aircraft used.

6.3 Conduct of Test/Check IR

The aeroplane
The aeroplane for the IR-skill test/proficiency check shall be suitably equipped for instrument flight.

The briefings
The pre-flight briefing shall be according to Chapter 2 of this manual.

The de-briefing and the assessment of the test will be according to Chapter 2 of this manual.

The skill test
The flight test items of the skill test/proficiency check must be performed according to the flight test standards in Chapter 3.

To establish and maintain PBN privileges, one approach in either Section 4 or Section 5 of the skill test/ proficiency check form shall be an RNP APCH.

General
This test is intended to simulate a practical flight. To this end, the first preference shall always be to fly the En-route Section as a transit to another airfield rather than as a triangular navigation exercise around the Malta FIR. Both Comiso, Catania Fontanarossa and Lampedusa are within practical range. However, if it is obvious that weather conditions preclude an approach in Sicily, or ATC will not accept the movement, a route within the FIR would be acceptable as a last resort. Both a precision – 3D (ILS) and a non-precision – 2D (VOR, NDB, LLZ, GPS) approaches are required. At least one approach must be procedural. The approaches can be flown in any order. Simulated weather conditions for the flight are: cloud throughout the levels flown and at minimums for the approaches; freezing level as actually experienced.

Section 1 – Departure
Performance planning must be in accordance with the ATO Operations Manual. The applicant must complete and submit an IFR flight plan. If possible, a SID shall be flown. The applicant shall don TM-CAD approved foggles/hood after take-off once the aeroplane has been put in the climb configuration. The applicant shall check the OAT regularly and check for ice when appropriate.

Section 2 – Airwork
It is assumed that full-panel straight & level, climbing, descending and turning will be assessed during the entire flight rather than as separate air work items. Item (d) will be covered by recovery from incipient stalls in the base turn and final approach configurations. Item (c), full panel unusual attitudes, will be covered by successful completion of Item (e). Before starting the limited panel manoeuvres, the PFD (or main AI and HSI/DI plus RMI) must be covered with TM-CAD approved screens, dimming is not sufficient. If a turn coordinator/turn needle is fitted then this shall be used; otherwise, use of a standby AI is acceptable. Instrument air work should be carried out on the transit back from Sicily or during the last navigation leg. The examiner is responsible for navigation and ATC liaison during the section. After the air work the aircraft should be sufficiently far from Luqa for the applicant to carry out all the necessary arrival procedures within

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a reasonable time. The applicant shall be briefed on his position and ATC service received before being given back responsibility for navigation and ATC liaison.

Section 3 – En-route

During the En-route Section the applicant shall track towards and away from a facility. GPS can be used as required if the equipment has a current database. Autopilot may be used in the cruise and descent in Heading, Altitude or Vertical Speed modes. Position reports are as required by ATC. The examiner may simulate a build-up of ice and require appropriate touch-drills. The transit to Sicily should normally be made along an ATS route (usually N982). This will require a transit at FL100. If, during the climb, it becomes apparent that FL100 will not be reached then a lower level, outside CAS, should be negotiated. Although the return from Sicily will normally be flight planned as IFR, examiners should consider cancelling IFR on departure from Comiso/Catania and transiting at a lower, VFR level during which the air work can be carried out. IFR can be resumed before the recovery to Luqa.

Section 4 – Precision Approach (3D)

The precision approach – 3D (ILS) may be flown procedurally or using radar vectors. It can be the first or second approach flown. GPS shall be disabled and the MFD hidden if a procedural approach is flown. This only applies if the procedural approach does not require use of GPS. The approach must be hand-flown without the use of a flight director.

Section 5 – Non-precision approach (2D)

This can be a VOR, LLZ, NDB or GPS approach, flown procedurally or using radar vectors. It can be the first or second approach flown. If both approaches are to be at Luqa, it would be preferable to fly the hold and procedural approach first (precision 3D or non-precision 2D). If equipment allows, the hold shall be a single-needle exercise. Wind information shall be removed from the PFD if possible. Loss of glidepath information for the LLZ approach can be simulated on the G950/G1000 by a post-it type label being placed over the glidepath indicator. GPS shall be disabled (if possible) and the MFD hidden during the hold and procedural approach. This only applies if the procedural approach does not require use of GPS. The approach must be hand-flown without use of a flight director. During the pre-flight brief the examiner must ascertain whether a CDFA is planned and what increment the applicant plans to add to MDA/H.

Section 6 – Asymmetric

The EFATO shall be given, at a safe height (500 ft), on the go-around from the first approach. If the first approach is at Luqa then the aircraft shall remain on one engine for the subsequent approach. If at Comiso or Catania, the examiner shall restore the failed engine on climb-out, but not before he has seen all drills completed and the aircraft stabilised at VYSE. It is the examiner's responsibility to reset any associated controls (i.e. mixture, cowl flaps, rpm) when restoring or re-failing the engine. The engine shall be re-failed at some point approaching Luqa, preferably in the descent so that the asymmetric forces are minimised. During an asymmetric ILS approach the foggles/hood shall be worn for the go around and then removed once the aircraft is stabilised in the climb. During an asymmetric non-precision approach – 2D, the examiner has the choice of leaving the applicant's foggles/hood on or removing them just before MDA. If the school's Operations Manual requires an ACH of greater than 200ft then an increment may need to be added to the DA for a precision approach – 3D. Schools using an ACH of greater than 300ft shall be referred to TM-CAD before any test is undertaken.

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6.4 When proficiency is not reached (IR)

Repeat Items
Repeats are at the examiner's discretion but shall be used sparingly on a skill test, and only when some external factor is judged to have affected the applicant's performance.

Partial Pass
An applicant gaining a partial pass will be required to retake the failed section. He will be expected to put the aeroplane in a position from which this section can be carried out. Once the failed section has been flown, the test is complete; however, if the applicant elects to fly the aeroplane back to Luqa, he will be assessed.

6.5 Conduct of Test/Check MEP/IR

General
The combined MEP/IR Proficiency Check is subject to many of the conditions listed in the briefs for the CPL and IR STs, but there are some fundamental differences.

Section 1 – Departure
Performance planning shall be carried out; however, the choice of safety factors is the applicant's unless he is operating to a specified operations manual. The departure shall be carried out without visual reference (using foggles or a hood) once the aeroplane is established in the climb. Autopilot may be used, if fitted and serviceable.

Section 2 – Visual Airwork
This should be carried out after the route sector. All mandatory items must be covered. The applicant is responsible for lookout throughout.

Section 3B – Instrument Flight
Excepting the air work and the ILS approach, the applicant have full use of the equipment fitted to the aeroplane. The route sector can comprise the SID to Gozo followed by a leg to 20nm west of the GZO beacon but, at the examiner's discretion, may be flown to Comiso. Instrument air work, comprising limited panel turns and UA recoveries shall be carried out, along with the visual air work, after the route sector. All air work exercises must be hand-flown, but a flight director may be used if fitted. During this phase, the examiner is responsible for ATC liaison and navigation. After the air work the examiner shall brief the applicant on his position and ATC service received before giving him control for the recovery to Luqa. The most efficient format would be to carry out a hold and procedural approach followed by a radar vectored approach, but this may not always be possible. Loss of glidepath information for a LLZ approach can be simulated on the G1000 by use of a post-it type label being placed over the glidepath indicator. Both autopilot and flight director may be used during the hold and non-precision approach – 2D. The autopilot may not be used for the ILS and shall be disconnected before localiser capture.

Section 4 – Approach and Landing
Circuits to achieve a normal and flapless landing may be flown after the asymmetric go around, with the examiner restoring the failed engine on the climb-out. The examiner will then have to re-fail the engine before the asymmetric landing. The examiner is responsible for resetting the associated controls. The examiner must agree procedures for touch-and-go landings with the applicant.

Section 5 – Abnormal Procedures
A rejected take-off must be carried out at some stage. See CPL ST Section 6. Although it is not a mandatory item, examiners shall consider simulating a system failure of some kind. On initial ME class rating skill tests

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an engine shutdown and restart is a mandatory item. Considerations for these 2 items can be found in the CPL ST Sections 5 and 6.

Section 6 – Asymmetric
Items in this section shall be flown by sole reference to instruments as far as is possible. However, these items count towards both the IR and the ME class rating even though they are normally flown on instruments. Should the applicant's performance during the EFATO and/or asymmetric go around on instruments be unsatisfactory, consideration shall be given to re-flying them visually so that the class rating can be properly assessed.

6.6 When proficiency is not reached (MEP/IR)

Repeat Items
Repeats are at the examiner's discretion. An applicant undergoing a proficiency check has previously shown that could conduct the necessary manoeuvres and items may be repeated where the examiner considers it appropriate. Applicants shall not, however, be re-taught by the examiner before repeating a manoeuvre.

Pass/Fail
If an item of the test is failed, then that section is failed and must be retested. If 2 sections are failed, then the entire rating must be re-flown.

6.7 Combined Tests

Whilst it is usual to combine a class rating and instrument rating renewal/revalidation proficiency check, combining CPL and IR skills tests or Class rating revalidations and initial IR skills tests may not be in the best interests of the applicant.

6.7.1 CPL plus Initial IR

The CPL skills test, by itself, is likely to take at least 2:45 block time. Although there are some elements common to both tests (approach configuration stalls, limited panel, asymmetric work) and one of the transits to/from Sicily could be used for IR Section 3, the requirement to fly a hold and 2 instrument approaches will add at least 35 minutes to the flight. In addition, unsatisfactory performance in any of the 'shared' items will require them to be re-flown visually so that they can be assessed for the CPL. Expecting an ab-initio applicant to be on the top of his game for over 3 hours is unrealistic and so these tests shall not normally be combined. Any request to do so (for example, an experienced ICAO licence holder converting to an EASA licence) shall first be approved by TM-CAD.

6.7.2 Initial IR plus Class Rating

These tests could be combined and would produce a format similar to the combined IR and CR proficiency check. However, the test will be longer than the proficiency check as the en-route section is likely to require a transit to Sicily and will, in any case, require a longer en-route section than the proficiency check. Examiners will, again, need to be mindful of the consequences of the applicant failing any of the 'shared' items, which will now include some of the stall recoveries. Before agreeing to combine the tests, the examiner will need to brief the applicant comprehensively and explain the plusses and minuses of such an action.

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Chapter 7 – Assessment of competence of instructors (aeroplane)

7.1 Conduct of the Assessment

The assessment of competence must be performed according to FCL.935. The test comprises oral theoretical examinations on the ground, pre-flight and post flight briefings and in-flight demonstrations.

The accommodation for the theoretical part of the test shall be a suitable location for giving a test lecture to students.

The following books and documents shall be available for the briefings and the flight:
a) AIP
b) AICs
c) Navigation material, charts, computer
d) Flight handbooks
e) Instructor guides
f) Training syllabus
g) Pilot licences

Appropriate literature and training aids being representative for the test aeroplane shall be used for the lecture and briefings.

7.2 Theoretical Knowledge

The aim of the oral examination is to determine the applicant's knowledge of the following subjects:
a) Air law
b) Aeroplane general knowledge
c) Flight performance and planning
d) Human performance and limitations
e) Meteorology
f) Navigation
g) Operational procedures
h) Principles of flight
i) Administration

The oral examination will normally take 1 hour but is dependent on the type of test and the applicant's performance.

1. Questions shall be of practical nature related to the subjects.
2. Questions may be answered using whatever training aids or equipment is available.
3. Questions may be answered by referring to books, documents and diagrams.

If the test is used for the issue or revalidation of an IRI, the questions shall also focus on instrument flying techniques, IR regulations and procedures.

If the test is used for the issue or revalidation of a FI (ME) or CRI (ME) specific questions relating to asymmetric flight are to be asked

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7.3 The Lecture

The applicant is required to give a lecture under test conditions to his student 'audience', one of whom will be the examiner.

1. The subject of the lecture will be determined by the examiner and preferably chosen from the exercises from FCL.930.FI, FCL.930.TRI, FCL.930.CRI and FCL.930.IRI, FCL.930.MCCI.
2. Time of preparation for the test lecture is agreed upon beforehand with the examiner.
3. The lecture shall not exceed 45 minutes.
4. The examiner, in the case he is acting as a student, shall clearly explain which level he must be considered as a student.
5. Applicants must expect to use whatever training aids and equipment are available. However, training aids and equipment shall reflect current technical standards.
6. An aeroplane model, representing the test aeroplane, is essential.

The four basic components of the lecture will be:

1. The aim of the lesson
2. Principles of flight (briefest reference only)
3. Air exercises (what and how and by whom)
4. Airmanship (weather, flight safety, etc.)

The lecture shall contain:

1. good time frame
2. a structural "build-up"
3. no untrue statements
4. a theoretical explanation of the practical lesson
5. explanation of airmanship
6. mention of common failures of students during exercises
7. explanation of the corrections on the failures
8. all practical flight details
9. check questions for the audience
10. time for the audience to ask questions

During the lecture the applicant will be assessed by the examiner on the following items:

1. Visual presentation
2. Technical accuracy
3. Clarity of explanation
4. Clarity of speech
5. Instructional techniques
6. Use of models and aids
7. Student participation

7.4 The pre-flight briefing

The pre-flight briefing shall be a short practical briefing of about 15 to 20 minutes.

The examiner shall explain that throughout the flight he will act as the student. The level of experience of this student must be clearly identified.

The assessment of the pre-flight briefing will be in accordance with the assessment items mentioned above.

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7.5 The flight

When the assessment is conducted for an SFI rating it shall include a minimum of 3 hours of flight instruction.

For all other instructor ratings, the assessment shall consist of a minimum of 1 hour of flight instruction.
The chosen exercise briefed during the pre-flight briefing shall be the main exercise of the flight.
Before the flight the examiner shall clearly identify:

1. which exercises the applicant is to fly without unnecessary instructional comments,
2. which exercises are to be taught to the student, and
3. which exercises may be demonstrated to the student but with necessary accompanying instructional comments.

During the skill test the applicant shall occupy the seat normally occupied by the instructor. The examiner acting as a student must act according to the instructions given by the applicant. The examiner shall not deliberately set traps, but act as a normal student and introduce common student errors for the applicant to identify and correct.

The applicant shall:

1. demonstrate instructional knowledge of common errors made by students in performing exercises.
2. demonstrate and simultaneously explain the flight exercises.
3. analyse and correct simulated common errors.

The applicant will be expected to demonstrate personal standards of flying ability and airmanship to the level of a professional pilot.

The assessment of the flight will contain:

1. Arrangement of demo
2. Synchronisation of speech with demo
3. Correction of faults
4. Aeroplane handling
5. Instructional technique
6. General airmanship/safety
7. Positioning, use of airspace

7.6 Post Flight Briefing

The assessment of the post-flight briefing will be in accordance with the pre-flight briefing.

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